Harveian Lectures

ON THE

HEART IN ITS RELATION TO PREGNANCY, PARTURITION, AND THE PUERPERAL STATE.

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LECTURE III.[1]

Delivered on Dec. 19th, 1895.

HEART FAILURE AFTER DELIVERY.

MR. PRESIDENT AND GENTLEMEN,—All writers on the subject of heart disease in connexion with the gravid state seem to be unanimous in regarding the condition of the heart *after parturition* as more critical than at any other time, and certainly death from heart failure occurs with the greatest frequency in patients during the lying-in week after labour. Reference has already been made to some of the conditions present after delivery which act with special prejudice on the heart; they may be summed up as follows:—1. The down-bearing pains of the second stage of labour throw an additional pressure upon the vascular system and strain the weakened powers of an already enfeebled or diseased heart (Macdonald). 2. Arterial pressure is suddenly diminished and venous pressure increased. The work for the right heart is increased. These changes of pressure quickly overcome and equalised by a sound heart may act very injuriously upon a weakened organ (Spiegelberg). 3. In many cases there is reason to believe that the muscular tissue of the heart is already weakened at the close of pregnancy by fatty degeneration, and this condition renders the heart still less able to bear any additional strain. Lebert's arguments support this view. 4. During pregnancy the nervous system is in a state of exalted tension; after delivery there is a reactionary depression, and this fall must act injuriously on the nervous mechanism of the heart. Reference has already been made to Fritsch's view—viz., that at the moment of delivery danger is apt to arise from the dilated right heart being left too empty of blood, the large parametric venous plexuses and the other abdominal veins affording an abundance of space to accommodate a large quantity of blood, especially after delivery and when the abdominal pressure is not so great as it ought to be. According to his views this condition of affairs is apt to lead to a sudden gush of blood from the abdomen into the empty right side of the heart and to exert there a paralysing effect upon the organ, explained as he believes by Panum's experiment, which shows that a sudden gush of blood into the empty heart does paralyse that organ. The right heart begins to contract upon the too small quantity of blood contained in it, its action is weak and irregular, too little blood gets to the pulmonary circulation, and the blood is consequently imperfectly aerated. This again leads to imperfect cerebral nutrition, and so a vicious circle is established which ends in death.

On this view we need not lay much stress; indeed, I know of very little evidence that can be brought forward in support of it. The only clinical evidence which seems favourable to it is afforded by the case of a multipara who came under my notice some years ago and who, after a normal labour and within a few minutes after the expression of the placenta, suddenly became faint and lost consciousness; the lips were blanched, the pulse could scarcely be felt at the wrist, and the heart's action was irregular and feeble. Remembering the assertion that owing to the immense decrease of the intra-abdominal pressure after delivery the blood might accumulate to a dangerous amount in the mother's abdominal veins, the medical attendant caught up a hard sofa-cushion, placed it on the abdomen, and then with the help of a binder proceeded to restore the abdominal pressure on the veins. In this case the result of the experiment was most happy; as in a few minutes colour came back to the face, the radial pulse became fuller and stronger, and the patient quickly regained consciousness. Until more conclusive proofs for the correctness of Fritsch's view can be brought forward we must consider his conclusions to be at least "not proven."

Having thus briefly reviewed the influences adverse to the heart after delivery it will be interesting to study some instances of cardiac failure after labour.

CASE 1.—A delicate-looking married woman passed through her first pregnancy without any complication worthy of note. At her confinement she was attended by one of the midwives of the British Lying-in Hospital, and I was informed that with the exception of a little faintness during the latter part of the labour there was nothing abnormal. About twenty-four hours, however, after the conclusion of labour her state began to cause anxiety; she complained of palpitation and breathlessness, wanted to be propped up in the bed in a sitting posture, felt very faint, and had much præcordial pain. When I saw the patient on the evening of the second day after delivery she was sitting up in bed supported by pillows, her face and lips were very markedly pale, beads of cold perspiration were on the fore-head, and the breathing was hurried and shallow, the respiration being about 40 per minute. The voice was gasping and feeble. The pulse was 120, very weak and irregular, and the temperature was 100° F. The area of the heart's dulness was markedly increased, and the apex beat, which was feeble and diffuse, was felt with difficulty outside the vertical nipple line, and was lower than normal. On auscultation a well-marked systolic murmur could be heard at the apex. The patient was too feeble to bear much examination, but the lung sounds seemed to be healthy. A history was elicited of an attack of rheumatic fever in childhood and of symptoms which suggested that the cardiac trouble was of long standing. Brandy was given freely in milk, and a mixture of ammonia and ether was prescribed. Next day the condition was practically unchanged. The urine was scanty and contained about one-third albumin; the legs had become œdematous, and sleeplessness was bitterly complained of. Digitalis was added to the ether mixture, and strychnia was ordered. For some days it seemed to be almost impossible that the heart could recover; then, at the end of a week from the time of delivery, the condition of this organ began to improve, the dropsy of the legs cleared up, the albumin disappeared from the urine, and convalescence was established. The systolic murmur remained unchanged and enlargement of the heart was very marked six weeks after labour. In this case, as far as could be determined, the failure affected principally the left side of the heart, and dilatation of the left ventricle was distinctly marked. The after-history of this case is of interest. The patient slowly regained her strength and was able to resume her household duties. About a year later she again became pregnant, but passed through her pregnancy and parturition without any sign of cardiac failure, and indeed without any complication save that of an adherent placenta and rather free post-partum hæmorrhage. I have heard that she is pregnant for the third time and so far is doing well.

CASE 2.[2]—A married woman aged thirty-two years was for about two years previously to her marriage noticed to be breathless on going up steep inclines and on ascending stairs, on which occasions she would place her hand over the region of her heart. There was nothing further observable about her condition to indicate that there was disease of any kind except a slight occasional dry cough, which was always increased by exposure to night air. She menstruated once after marriage. When about two months pregnant the cough and breathlessness increased considerably, and I was accordingly consulted regarding her health. I found her to be suffering from slight bronchitis, and also from mitral disease of the heart (systolic). I ordered a stimulant expectorant, which gave her great relief, and enjoined her to keep to the house. The cough abated considerably, but the breathing became steadily worse. On going out during the month of January (being the second time for a month or two) and walking quietly for about 500 yards, the patient became so breathless that she had almost to

[1] Lectures I. and II. were published in THE LANCET of Jan. 18th and 25th, 1896, respectively.

[2] Quoted by Dr. Angus Macdonald.

be carried home, and managed with the greatest difficulty to ascend two flights of steps which led from the street to her house. About a month afterwards she was seized with labour pains and gave birth with comparative ease to a living seven months' child. For three days she continued well, her breathing being quite easy. About 10 A.M. on the third day the nurse's attention was attracted to the fact that she was getting much worse by observing great coldness of the patient's extremities. Simultaneously with this she complained of weakness and the breathlessness became much increased; she was at the same time tormented by a severe cough, and her lips became cyanotic, so that she could not lie down, but had to sit upright, in which condition she died at 7 P.M. on the same evening.

CASE 3.[3]—A married woman aged thirty-eight years, who was pregnant for the first time, had suffered for many years from well-marked mitral disease. She was never able to walk without experiencing palpitation and dyspnœa; for three winters she had had asthmatic attacks with increasing emphysema. She remained fairly well until the fifth month of her pregnancy, when her cough increased and she had periodic attacks of hæmoptysis, the blood being bright-red in colour. Her face was dusky and her lips blue, but the pulse, though irregular, remained below 100. Labour commenced on March 23rd, 1893. The sitting posture was necessary throughout owing to the dyspnœa. With full dilatation of the cervix the pulse had risen to 130, and, an anæsthetic having been given, the forceps were applied; delivery was quite easy. A tight binder was applied as the child was extracted. The placenta was expressed, no ergot was given, and there was no post-partum hæmorrhage. The patient's condition was quite satisfactory until the third day except for the distressing cough and inability to lie down. She was then suddenly attacked with syncope without any apparent reason. On reaching her there was no pulse to be felt at the wrist; she was ashy white in colour, with cold, clammy sweat over the face, and gasping for breath; the respiration was 42 per minute. Ether was injected subcutaneously with liquor strychniæ ($\frac{1}{10}$ gr.) every two hours. These attacks continued, but with lessening severity, for three days. A mixture, composed of half a drachm of tincture of digitalis and twenty minims of liquor strychniæ, was given by the mouth every four hours with the best effect; but, as physiological symptoms of the latter drug occurred after the sixteenth dose, the amount of liquor strychniæ was reduced to five minims. Recovery was slow, but a year after the labour the patient's condition appeared to be about the same as it was previously to her pregnancy.

CASE 4.—A married woman, a multipara, was confined in the St. Mary's Hospital maternity department on May 9th, 1890. It is recorded that the patient had at that time severe double mitral disease, but that in spite of the cardiac disease both mother and child did well. On May 14th, 1894, labour commenced, and the clerk, noticing the deep red of the lips and the flushed face, examined the heart and noted the presence of mitral stenosis (second stage). He returned to the hospital to seek help, and in his absence the child was born. Some flooding occurred, but it was not excessive, and the placenta was easily expressed. Next day the patient was feeling quite comfortable, and seemed to be progressing very well. The pulse and temperature were quite normal and some after-pains were present. On May 16th—that is to say, on the third day—the resident obstetric officer was hurriedly summoned with the news that the patient was dying. When he arrived she was found to be lying on her back with the eyes turned upwards. She could not answer when she was spoken to, she did not put out her tongue when she was told to do so, and the lower jaw was held rigidly so that the mouth could not be opened. The pulse was 96, regular, and the wave was not very easily compressible. The heart was not enlarged; on auscultation there was heard at the apex a long presystolic murmur, with a short, sharp first sound, but no second sound. The pulmonic second sound was not much accentuated. At other areas the sounds were normal. There was no enlargement or pulsation of the veins of the neck. No pulsation of the liver was observed. There was no œdema of the feet. The respiration was 24 per minute; she suffered from some cough, but there was no expectoration. The chest moved freely on both sides. There was no dulness, but much coarse crepitation. No facial paralysis was noticed. All the limbs were flaccid, but one side not more so than the other. On pricking either limb on either side the patient moved it away. The temperature was 98·6° F. On May 16th at 6.30 P.M. facial paralysis on the right side was evident, the furrows of the forehead on that side being obliterated. The temperature was 100° and the pulse was slightly irregular in force, the condition being unchanged otherwise. On May 17th the general condition was unaltered. The nurse unwittingly directed attention to the presence of right hemiplegia by saying that the patient seemed to be in pain all down the left side, for whilst the right side was always still she kept moving the left continuously. This was so; she did not move the right side voluntarily, though she still moved all the limbs on the stimulus of a pinch. The bronchitis had increased, the crepitations in the lungs completely obscuring the heart sounds. She had lost flesh considerably during the previous thirty-six hours, though the nurse had done her best to feed her with liquid food; she had passed everything under her for the same time. She was moved into St. Mary's Hospital the same afternoon. In spite of the free use of strychnia, digitalis, and ammonia the heart gradually failed; she was unable to expectorate and became cyanotic; she gradually sank and died next day without convulsion, but became quite blue. She never showed any sign of being conscious of her surroundings. A post-mortem examination was unfortunately refused by the friends. (I am indebted for notes of this case to my house-physician, Mr. Lane.)

CASE 5.—Mr. Salisbury-Sharpe has kindly supplied me with notes of the following case:—"A married woman had passed successfully through four pregnancies which followed each other in rather rapid succession, being in all respects normal. The last labour took place on Dec. 25th, 1894. She was expecting to be confined again at the end of January, 1896, but sent for me on Nov. 13th last owing to the onset of hæmorrhage. On arriving I found that the os was dilated to the size of a shilling and the placenta presenting. The patient had evidently lost blood freely. The heart on examination was found to be dilated; the pulse was small, soft, and rapid; and the breathing was hurried. With the help of Barnes's bags and version the uterus was successfully emptied without the recurrence of hæmorrhage. After delivery the patient rallied well and, except that the pulse was rapid (110 to 120) and the breathing rather laboured, there was no cause for anxiety. On both the second and third days all was going on well and the temperature was keeping normal; but on the fourth day the pulse-rate rose to 150 and the breathing became more embarrassed. In spite of the administration of digitalis, ether, and ammonia every two hours the patient slowly sank and died at 5 A.M. on the fifth day after delivery."

The above cases are of interest as they illustrate one mode of heart failure after delivery. In all these cases there was an interval after labour in which the heart's action was fairly well maintained, and during which there was fair reason to believe that the period of danger was past, and yet in each case failure of the heart began to make itself manifest during what might reasonably have been considered as the stage of convalescence. The group of cases serves to illustrate the fact that dangerous symptoms may be very slow in declaring themselves after labour, and that safety cannot be assured for some time after the strain of labour is past. I have already quoted Lébert as arguing that pregnancy and parturition are apt to operate very injuriously, not only upon the valves of the heart, but also upon its muscular tissue, and this point seems to be well illustrated by the foregoing cases. Spiegelberg's explanation, that the danger to the heart after delivery arises from variations in the arterial and venous pressures, certainly would not apply here, for in each case abundant time had elapsed after delivery for these pressures to equalise themselves, and it was in several instances the third or fourth day before serious symptoms developed themselves. It is equally clear that failure did not depend on any special valvular lesion, for the form of mischief varied in the several cases, and in one case there was no disease of the valves. The true explanation would seem to be that during labour the heart muscle is considerably strained and the way paved for the dilatation of exhaustion; then, owing to the reactionary enfeeblement of the nervous system after parturition and the possible weakening of the cardiac muscle by commencing fatty degeneration, the chances of recuperation are effectually barred. From the point of view of treatment the subject is of immense importance, for clearly with such a possibility

[3] Narrated by Dr. John Phillips: Practitioner, June, 1895.

before us it would be folly to postpone stimulant treatment until signs of cardiac failure had commenced. In all cases in which there is evidence of the presence of conditions likely to act injuriously on the heart it is our duty from the time of labour onwards to spare the heart every possible muscular exertion or fatigue, and to maintain its powers at the highest possible level by the liberal use of stimulants and cardiac tonics such as strychnia, ammonia, and digitalis. A very important question arises here—viz., as to how far venesection may sometimes be of service in lessening the strain upon a heart. Knowing as we do that the heart is called upon during pregnancy to move a column of blood above the normal, and that in many instances such excess of blood is not carried off by the loss which occurs in a normal third stage of labour, it becomes an important question whether a free blood-letting may not be the best mode of giving relief to an overburdened and failing heart after delivery. Dr. Phillips[4] gives an excellent illustration of this treatment in his third case. It is quoted as follows:—

"CASE 3. *Mitral stenosis and regurgitation.*—Mrs. ———, aged thirty, is pregnant for the second time; her first labour five years ago was to all appearances normal. She was attacked by acute rheumatism two years afterwards, and since this has had well-marked physical signs of mitral disease. During her present pregnancy she has suffered from cough, hæmoptysis, and swollen legs. She was taken in labour on May 3rd, 1892; the child was delivered by forceps; a sand bag was carefully applied over the abdomen as the child was withdrawn; the placenta came away naturally. There was no hæmorrhage, and no ergot was administered. She remained fairly well till the end of forty-eight hours, when severe dyspnœa and palpitation set in. Ether, digitalis, and strychnia were given, but without avail. Three leeches were then applied over the cardiac region with almost immediate relief. There was no return of the untoward symptoms, and her convalescence was normal. The physical signs eight months afterwards were unchanged."

I have illustrated, then, one mode in which heart failure may manifest itself after labour; there are two other methods which call for careful study and notice. In the first of these the suddenness of the collapse is the principal feature. The following cases illustrate this variety.

CASE 1.—(For the notes of this case I am indebted to my house physician, Mr. Thorne.) On March 1st, 1895, I was called by one of the extern clerks to a case of labour occurring in the St. Mary's Hospital Maternity Department. On arriving at the house I found a small stout woman in a somewhat exhausted condition; her pulse-rate was 140 per minute. The patient had been in labour for twenty-four hours, and for two hours the pains had been strong and frequent, yet there had been no advance in the presenting part during this latter period. The woman had previously passed through sixteen or seventeen quite normal confinements, only four children, however, being now alive. The last confinement had taken place three years before. On examination I found that the membranes were ruptured and that the head was presenting with the occiput lying posteriorly to the left. Having given chloroform, and having failed to secure forward rotation of the head by digital pressure, forceps were applied, and the child was delivered without any great difficulty. The after-birth was found to be adherent at one part and had to be removed by the hand. Chloroform was administered altogether for about twenty minutes, and during this time three or four drachms were used. After removal of the placenta the uterus retracted down fairly well, and all appeared to be going on satisfactorily. About fifteen minutes after the termination of labour, while the patient seemed to be recovering rapidly, she took three or four deep inspirations and became cyanosed, with the tongue protruding; respiration then ceased. Artificial respiration was tried, and the heart continued to beat feebly for about ten minutes, but without success.

Necropsy.—An inquest was ordered, and a post-mortem examination was made by Dr. Charles Gross some ninety hours after death. His report was to the following effect. The body was found to be that of a well-nourished woman with advanced decomposition of the face; all the superficial parts were more or less decomposed with the exception of the legs. On the back the skin was peeling. The heart weighed eleven ounces; its substance was pale and soft, and a microscopical examination showed that the heart muscle had undergone marked fatty degeneration. The cavities of the organ were empty; there were no valvular lesions. The lungs were small and congested. No thrombosis or embolism was to be found in the pulmonary arteries. The brain, kidneys, and other large organs were congested, but were otherwise normal. The thickness of the wall of the left ventricle varied from five-eighths to seven-eighths of an inch.

CASE 2.—Of this case I have unfortunately very imperfect notes, but the history of the patient is briefly as follows. A married woman was confined on Sept. 3rd, 1888, and had made favourable progress up to the 12th. While the husband was away for a short time on this date she attempted to get up and be about, and was found lying dead in a chair when her husband returned. A post-mortem examination was made, but no cause of death could be discovered.

In both these cases the suddenness of the fatal issue is the principal point, and in each instance a diseased condition of the cardiac muscle was probably the real cause of the heart failure. In the first case there is a high degree of probability that the disturbance of the venous pressure following delivery led to embarrassment of the right ventricle, and thus brought about a fatal ending.

While thus we have briefly reviewed two methods in which failure of cardiac action is shown, we have to recognise that in the majority of cases in which cardiac incompetency after labour is exhibited there has been evidence of heart weakness during pregnancy, and the strain of labour is the determining factor which finally damages the heart and leads to an arrest of its function either in the latter part of labour or more often within a more or less brief period after parturition has been accomplished. The following cases are examples of this method of failure:—

CASE 1.—Porak narrates the case of a woman aged thirty-eight years who had passed through two severe attacks of rheumatism. In August, 1879, she became pregnant for the second time. By the end of September debility, palpitation, and swelling of the legs had manifested themselves; throughout pregnancy these symptoms persisted, and by the end of the term she was very exhausted and breathless. Her confinement took place at full term and was finished satisfactorily, but from that date her condition became steadily worse. Strength was markedly lost and attacks of suffocation grew increasingly frequent and severe. The arms and legs became somewhat œdematous. Mitral and aortic insufficiency were found to exist, and death ensued eighteen days after delivery.

CASE 2.—Macdonald narrates a case of a woman who became pregnant for the second time while suffering from mitral stenosis. At the onset of this pregnancy her health was fairly good, but towards the middle of it she became markedly anæmic; breathlessness, palpitation, and general discomfort set in, and her legs became enormously œdematous. About the end of the seventh month there was present general œdema with cough and orthopnœa. He continues: "I intended about this time to arrange for a consultation, with the view of deciding upon the propriety or otherwise of inducing premature labour, as the patient was now unable either to lie down or move herself in bed, to such a degree were pulmonary œdema and anasarca present. But on May 18th, 1872, when the patient was near the end of the eighth month, she fell in labour. The delivery was easy. I gave chloroform with some hesitation at first, but it was well borne, though the pulse was exceedingly weak and very irregular. She did not improve much after the termination of the labour, the anasarca and the dyspnœic symptoms continued, and she was scarcely able to take any food. Her condition remained much at a standstill, however, till the morning of the sixth day after her delivery, when she suddenly fell back in bed dead. There was no post-mortem examination."

CASE 3.—Berthiot quotes a case which occurred in the practice of Dr. Icard, with the following history. The patient, who was six months advanced in her second pregnancy, consulted Berthiot in June, 1871, on account of swelling of the legs and breathlessness on exertion. Her first pregnancy had been quite normal and she had enjoyed good health until a short time previously. Examination of the heart showed the existence of mitral stenosis. In the early part of August the patient suffered from some slight eclamptic seizures, and eight days later she was delivered of a healthy male child. A few weeks after this all the cardiac troubles had become aggravated, the patient suffering from much breathlessness, constant malaise, and faintings. Œdema of

Loc. cit.

the legs and ascites soon afterwards developed, and she slowly sank and died.

Hardy and Behier [5] state that pulmonary congestion may end in death; in its active form sudden and acute congestion may produce instantaneous death, and Devergie regards this malady as a frequent cause of sudden death, since of forty cases which had a rapidly fatal ending he found twenty-four in which death seemed to be due to a pulmonary congestion alone or combined with cerebral congestion. Lebert adopts a similar view. It is quite possible that congestion and œdema of the lungs play an important part in bringing about a fatal termination in many cases in which the gravid condition is complicated by the presence of a weak or diseased heart; but as the pulmonary mischief depends mainly on a defective circulation in the lungs, secondary to the failure of the heart's action, it would be more scientific and accurate to attribute the cause of death primarily to the unhealthy state of the heart and not to some secondary lesion brought about by the weakness of the principal organ. Regarding then the three groups of cases already demonstrated, we see that failure of the heart, occurring during the puerperium, may manifest itself in three principal forms or methods. In the first group evidence of heart disease is either absent during pregnancy, or if manifested the symptoms are so slight that attention is hardly directed to them; even during the labour the heart proves fairly equal to its work, and even for some days afterwards shows no signs of failing. Morbid changes are, however, occurring in the muscular tissue, and maybe in the nervous supply of the organ, and after a deceptive lull of one, two, three, or more days the storm declares itself. In the second group of cases "sudden failure" is the principal feature, and it is in this group that Spiegelberg's theory finds perhaps its best exposition. I am inclined, however, to think that the variations in pressure suggested by this writer are really of less importance than a condition of fatty degeneration of the heart muscle dependent on the gravid condition, as already explained. A variation in the venous and arterial pressure may take its place with emotion, straining, or other muscular effort as a final cause, but I take it that the *fons et origo mali* lie in a weakened condition of the heart muscle, which renders it unequal to any sudden call upon its energy. The third group is by far the largest and most important, and it is with this group that we shall always be most concerned. It is clear, of course, that when symptoms of heart failure manifest themselves early in pregnancy it is almost certain that serious complications will arise after the heart has been subjected to the extra strain of delivery. Regarding this point Tarnier says: [6] "In heart disease all great and sudden efforts put the patient in peril, and labour is no exception to the rule. Running upstairs, racing to catch an omnibus or train, and sexual intercourse may all cause fatal syncope. The danger of labour is not special in this sense; it is dangerous in heart disease simply because it involves much effort." Moreover, there is the additional danger to which reference has already been made—viz., that in all probability retrograde changes do take place in the cardiac muscle after the close of pregnancy. If this theory be accepted—and there seems to be considerable argument in favour of it—then it is certain that though the extra strain of pregnancy and labour be past, still the already weakened heart has to deal with a fresh cause of exhaustion, and is quite unfitted to meet any mechanical difficulties of the circulation or any shock due to fear, fright, or sudden excitement.

We may now proceed to sum up the conclusions to which we have been led. They are as follow:—1. Both by clinical evidence and by logical deduction we are justified in accepting the fact of hypertrophy of the left ventricle occurring in normal pregnancy as proven. In delicate and feebly developed subjects it may sometimes be absent, and in these cases signs and symptoms of cardiac insufficiency are likely to occur. 2. A certain amount of dilatation of all the chambers of the heart does normally occur in pregnancy. 3. Failure of the ventricle has a distinct effect upon the course of pregnancy. In the early months it leads to abortion and in the later months to premature delivery. Porak confirms this point, and says that "heart troubles have an evident influence on pregnancy, by provoking metrorrhagias, by determining very often abortions or premature delivery, by producing, maybe, placental lesions, and by acting harmfully on the infant, who sometimes dies before its birth, or is born under conditions not favourable to development and disposing towards premature death." 4. The heart during pregnancy and the puerperium is specially liable to undergo fatty degeneration. This may be due to retrograde changes taking place after delivery, or may depend on the premature setting in of these changes together with an insufficiently oxygenated state of the blood, dependent partly on anæmia and partly on lung disease. 5. The condition of the muscular heart wall is of more importance during pregnancy than the valvular lesion; many women with valvular lesions pass through their early pregnancies without any sign of heart failure, but as the heart muscle becomes deteriorated by the strain of repeated pregnancies they show increasing evidence of cardiac insufficiency. 6. Of all the forms of valvular lesion mitral stenosis of a marked degree is the most disastrous; this is largely due to the extra strain thrown in these cases on the pulmonary circulation and the right heart. The increased arterial tension, the increased volume of blood, and the increased development of the left ventricle all tend to produce dilatation of the left auricle and the right ventricle. The pulmonary circulation is thus kept continually congested, unless pronounced hypertrophy of the right ventricle takes place. At the close of delivery, when more blood collects in the right side of the heart, the risk is increased and the danger reaches its maximum.

Treatment.—The question is often brought before us, Is marriage to be permitted when the woman is the subject of chronic heart disease? Regarding this Macdonald says: "Chronic heart disease ought to be looked upon as a grave contra-indication of marriage, more especially if it assumes the form of anything approaching to severe stenosis of the mitral or to serious aortic incompetence. In such cases we ought, if consulted, to dissuade from marriage." On this point I do not feel inclined to adopt Macdonald's opinion. If we read carefully over the long lists of cases of heart mischief published from time to time we shall notice (as has been already said) that many of the women had borne several children without any complication though undoubted cardiac mischief had existed from the time of their first conception. Provided a valvular lesion is well compensated and the muscular tissue of the heart can be judged to be sound, and provided also that the patient is a young woman in whom processes of repair may reasonably be expected to go on at a healthy rate, there would be no just reason for forbidding her to marry. In every case it would be well, if the patient has not been under medical observation previously, to advise her to remain under medical supervision for the space of six months, or even a year, that an opinion might be formed whether the disease was quiescent and vascular equilibrium well established, or whether, on the other hand, yielding of the ventricular walls and dilatation of the cavities were slowly advancing. I quite agree with Macdonald that we ought not to give our sanction to marriage if, in connexion with chronic heart disease, there are any serious symptoms of cardiac disturbance present, such as attacks of dyspnœa, breathlessness, palpitation on exertion, hæmoptysis, &c.; and this injunction ought to be the more imperative the younger the patient is and the more recent the acute disorder which has given rise to the lesion.

Induction of abortion and premature labour.—We have already seen that abortion and premature labour often occur spontaneously in cases of failing heart; but the question is frequently asked whether it is good treatment to induce delivery in patients suffering from active heart mischief during pregnancy. The question should rather be put in another form — viz., Do cases ever exist in which it is justifiable to bring about abortion or premature delivery? To the first form of question we must certainly answer "No," but to the second we can reply "Yes." It is true that in a certain number of cases delivery by nature's efforts alone has led to an immediate improvement in the heart symptoms, but it is none the less true that when physicians have induced labour during the latter months because of a condition of cardiac insufficiency the result has been generally disastrous. It has been well said that the condition of any patient in whom it is thought a necessary operation is one of extreme gravity, and the mere fact of interrupting the pregnancy will not stay the cardiac degeneration which is going on. Although the patient may survive the labour she will probably succumb during the early days of the puerperium. In practice it would seem that artificially induced labour throws more

[5] Traité de Pathologie Interne.
[6] Journal des Sages-Femmes, Jan. 16th, 1894.

strain on the heart than when the process is originated by nature. Clearly when the heart has already been exposed to the toil of seven or eight months of utero-gestation and is showing signs of rapid failure it is not prudent to suddenly throw upon it the effort of labour. The cases in which we should resort to the induction of premature labour are those in which it seems desirable at any cost to relieve the diaphragm from the upward pressure of a large abdominal tumour such as the pregnant uterus. With regard to abortion in the early months I think that the case is different. In many recorded instances of serious cardiac complications rendering the latter part of pregnancy, labour, and the puerperium a period of continued danger, and resulting too often in death, it is clear that symptoms of commencing failure such as palpitation, breathlessness on exertion, and malaise had been noted as early as the third or fourth month. In such a case I fail to see the justification for exposing a failing heart to the strain of pregnancy during the remaining months of utero-gestation and would advise immediate abortion. The emptying of the pregnant uterus at the fourth month cannot be compared with the strain of labour in the last two months of utero-gestation. I should be disposed to recommend the same course in a patient who had heart disease and who had passed through three or four confinements safely, for should she become pregnant again clinical experience demonstrates that the risk she encounters is vastly increased. No physician would lightly interfere with the course of pregnancy, but it is folly to allow things to take their course when science has taught us that the course is almost certainly laid on the downhill track. In conducting the labour at full term the point may be considered as established that the second stage should be made as short as possible and that forceps or version are most valuable aids.

Post-partum hæmorrhage.—Regarding the action of free bleeding during the third stage of labour I would earnestly bear testimony to its useful effect. A free loss tends to relieve the right heart from undue engorgement and considerably lessens the risks of sudden stoppage of the heart. Equally useful is the application of leeches over the liver or heart during the puerperium when blueness of the lips and face, with dyspnœa and pulmonary troubles, tell a tale of an over-distended and failing right ventricle.

Drugs.—Of all drugs strychnia and nitrite of amyl have seemed to me to be the most useful. The latter drug, by dilating the arterioles and keeping the blood in the peripheral circulation, gives temporary relief to the failing right ventricle and lessens the work of the overburdened heart. The action of strychnia as a cardiac tonic is too well known to need notice here.

THE NATURE OF ANÆSTHESIA: AN APPENDED NOTE.[1]

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Introductory.

To understand the true name of anæsthesia has proved a difficult problem to many. To explain it is no mere academic exercise, for given such an explanation, it must influence us alike in the methods we adopt in handling the various anæsthetics and the means we pursue to prevent inherent dangers or to avert accidental perils. For example, in days when nitrous oxide was deemed to be an asphyxiant it was the practice to give it rigidly excluding all air. Now we recognise it has a true anæsthetic action, and so administer it, as we exhibit other general anæsthetics, with air or oxygen to avoid the occurrence of asphyxial symptoms as unnecessary as they are undesirable. Nor should we be justified in employing substances as powerful as are anæsthetics unless we could accurately appreciate their physiological behaviour. It is to inquire what we know about anæsthesia that this note is written.

Paths of Anæsthesia.—(a) *Nerve endings;* (b) *sensory nerves;* (c) *ganglionic centres; and* (d) *perceptive mechanism.*

Anæsthesia occurs under various conditions. All are familiar with the disorders of sensation which occur in various forms of nervous disease, and give rise to hyperæsthesia on the one hand and anæsthesia upon the other: (*a*) Variations in the inter-relations of the end organs of the skin or mucous membrane; (*b*) of the sensory nerve or nerve of conveyance; (*c*) of the ganglionic nerve centres which translate the sensory stimulus into a feeling; and (*d*) the consciousness which perceives the feeling as pain or pleasure may under morbid conditions of the organism give rise to true anæsthesia. Artificially we are able to bring about the same state of things, producing a transient anæsthesia. Thus, by the use of cocaine we act upon the nerve ends in skin and mucous membranes, and prevent conveyance of sensory stimuli passing along the nerves. In the same manner carbolic acid or chloroform when applied to mucous membrane or even skin will, by coagulating the albuminous materials with which they are brought in contact, cause anæsthesia. General anæsthetics even in a very early stage of narcosis will act upon (*c*) the ganglionic nerve tissues and prevent painful sensations being recognised. A few inspirations of ether or chloroform can, without paralysing motion or dulling the conductivity of the nerves, remove sense of pain even though the patient may struggle, fight, or express in no measured terms his views on what is passing through his mind. He is in the land of dreams, his talk and his action have relation with phantom forms and illusory communications peopling that teeming waste. The curtain has dropped betwixt him and earth. In hypnotism we possess an example of a state in which pain is felt, but perceived as pleasure, or at least not recognised as suffering. It is, after all, life is not; only what it seems. The curious in such matters will find in Moll's book many examples of unquestionable instances of absolute anæsthesia, although there was every reason to believe that both the end organs in the skin, the sensory tracts, and the ganglionic nerve tissue were intact and capable of producing and conveying sense stimuli; nevertheless the perception arrived at was not that of pain. The perceptive mechanism was blocked. In the days of Moore, anæsthesia was attempted by compression of the nerve trunks, and nerve sensations were in this way blocked at the point of pressure. Thus every link in the chain between skin, which initiates the sense stimulus, and the nerve centre, which initiates the perception of pain, has been tested in the endeavour to achieve surgical anæsthesia.

Peripheral Sense Organ Anæsthesia.

Local anæsthesia, the blocking of the sense stimulus at the skin or mucous membrane, is of course of little value in any save the most trivial operations. The agents employed and the elaborate plans suggested to produce it have not proved themselves safe or sufficient. Bichât, whose ever delightful book dealing with the phenomena of Life and Death deserves more study than it gets nowadays, taught the duality of life, a life of mere functional existence and one of relativity. In anæsthesia produced by agents such as nitrous oxide, ether, or chloroform the life of relativity falls into abeyance, while the functional life or existence persists. But just as it is found impossible to limit the activity of a local anæsthetic to a regional area, so is it impossible to draw a hard and fast line between the influence of a general anæsthetic upon the cerebral centres and its overflow to the vital centres.

Aim in the Production of Anæsthesia.

The problem before us is to discover how best to produce anæsthesia without allowing the ordinary processes of life to be trenched upon. We have advanced some distance along the road leading to this discovery, but we still have very much to learn, and what is more, very much more to unlearn. Whatever personal satisfaction may be the result of a frame of mind which leads its owner to believe he knows all there is to be known about anæsthetics and anæsthesia, it is one which, sooner or later, will not be shared by the friends of some of his patients.

Study of the Action of Anæsthetics.[2]

In the course of a very able paper on Anæsthesia Laude Brunton suggests alcohol as one of the best substances to study to arrive at an idea of the way in which the general anæsthetics act. He adds that carbonic anhydride is the most widely distributed body having claims to the title of anæsthetic.

Definition of Anæsthesia.

It may be useful in this place to ask what definition of

[1] A paper read before the Odontological Society of Great Britain on Jan. 13th, 1896.

[2] THE LANCET, 1895, pp. 49, 80, and 143. See also Stimulants and Narcotics, by Dr. Anstie.

"anæsthetic" is to be adopted. Of course, I use the word in its colloquial acceptation, the one first suggested by Dr. Oliver Wendell Holmes. It seems to be now generally admitted that although many things may produce loss of sensation through abeyance of the faculty whereby we feel pain, yet none should be regarded as anæsthetics unless they exert some definite influence upon the tissues of the body rendering them indifferent to pain, and that quite irrespective of their preventing due access to the tissues of some vital constituent. An ox pole-axed is rendered anæsthetic; a man poisoned by a charcoal stove grows anæsthetic after inhaling the fumes of carbonic oxide gas until he is practically at the verge of death; an indifferent gas, such as nitrogen, can by excluding oxygen produce asphyxia, in the advanced stage of which perception to pain grows deadened or lost. In these cases the stunning, the carbonic oxide poisoning, and the oxygen starvation due to the indifferent gas act by virtue of interference with necessary vital processes but possess in themselves no anæsthetic properties and are not anæsthetics. It is true that carbonic anhydride has been employed both as a general and a local anæsthetic, nitrogen has also had its vogue; but as yet pole-axing has met with but scant favour save for the lower animals.

True and False Anæsthesia.

Brown-Séquard[3] has pointed out that carbonic anhydride, chloroform, and other vapours, when allowed to impinge upon the mucous membrane of the larynx, trachea, or even upon certain skin areas, while they are prevented from entering the lungs, produce unconsciousness of pain although the animal is awake and alert. Brown-Séquard's theory that stimulation of the area supplied by the superior laryngeal branch of the vagus produced a sort of reflex inhibition of the brain's power of perception does not concern us at present. Carbonic anhydride has been also used as a general anæsthetic. Ozanam[4] employed a mixture of 75 carbonic anhydride to 25 of air. He rendered a young man unconscious while an abscess was opened. It has also been suggested that ether is rendered more effectual by combining its use with that of carbonic anhydride, and even nitrous oxide has been used in combination with the inspired air of patients, thus producing a mixed anæsthesia due to these two agents. Waller[5] has further shown that carbonic anhydride produced a brief abolition or diminution followed by prolonged augmentation of electrical excitability in the isolated nerve of frogs. This, however, is influenced by the amount of carbonic anhydride used. Expired air produces augmentation of excitability, while a large quantity of carbonic anhydride gives the result stated above—viz., primary abolition and secondary augmentation. The use of carbonic anhydride as a local anæsthetic takes us back to the days of Pliny. Experiments have been undertaken which prove that carbonic anhydride possesses the power of producing unconsciousness only so long as the oxygen tension in the blood remains below a certain level. Gréhant[6] employed mixtures of common air and carbonic anhydride, and found that when the animals experimented upon were completely narcotised the gas of the blood contained 95·4 per cent. of carbonic anhydride as against the normal 34·3 per cent. (Pflüger)[7]. Gréhant's results had been obtained by Lallemand and Perrin as early as in 1860 ("Rôle de l'Alcohol et des Anesthétiques dans l'Organisme," p. 405). This state of unconsciousness, however, is not one of anæsthesia and is only obtained at the expense of grave peril to the individual. The bodies commonly employed as anæsthetics—nitrous oxide, ether, and chloroform—must, then, differ in their action from carbonic anhydride. That this is so our present knowledge permits us to say, but compels us to admit that, so far as many of our methods are concerned, anæsthesia is, as Dastre[8] has said, "the first step in a general poisoning of the organism." It is the realisation of the truth of this dictum which compels us at once to recognise the necessity of understanding the precise range of safety limiting artificial toxæmia, and to appreciate the responsibility falling upon those who undertake the control of producing and limiting it.

Theories of Anæsthesia.

In the early days of chloroform two very careful observers, Flourens[9] and Longet[10] were led by their researches to advance a theory reasonable enough at that time. They asserted that the anæsthetics possessed a selective action upon the nervous tissues. Thus, if an anæsthetic was taken it at once found its way to the nerve cells and produced unconsciousness. Other observers have believed that because post-mortem examination of the tissues of those dead after taking anæsthetics revealed the fact that the nerve tissues contained a somewhat larger proportion of the anæsthetic employed than other tissues, therefore this selective power was a reality. We now know the theory to be false and the reasoning fallacious, as the nervous tissues do not actually take up more of the anæsthetic, but retain more of it.

Mode of Action of Anæsthetics.

It then becomes a matter of very serious moment to ascertain in what way the anæsthetic enters the organism, what paths it takes, and by what means it is thrown off. Knowledge upon these points will enable us to ascertain how far anæsthesia trenches upon the vital processes of the organism. The lungs, the heart, and the brain have been called the tripod of life. Death, we know, must occur when the lungs or the heart cease to perform their function; but of the cerebro-spinal axis only the lower ganglionic centres are, even in mammals, essential to the existence of the animal. Hughlings Jackson[11] in his lectures on the evolution and dissolution of the nervous system, after pointing out that the evolution of the nervous centres is the "putting together of the nervous system," and involves a correlation of the most automatic with the most voluntary—the automatic being, through the necessity of the existence of the creature, the most stable and hence most highly organised; the most voluntary being open to constant change to meet environing necessities, and hence most unstable and less organised—goes on to show how dissolution is the reverse of this evolution—is, in point of fact, unpicking the lock of life. He adds: "In uniform dissolution the whole nervous system is under the same conditions or evil influence—the evolution of the whole nervous system is comparatively evenly reversed. In these cases the whole nervous system is 'reduced,' but the different centres are not equally affected. An injurious agency—say, alcohol—taken into the system flows to all parts of it; but the highest centres, being the least organised, give out first and most. The middle centres, being more organised, resist longer, and the lowest centres, being most organised, resist longest. Did not the lowest centres for respiration and circulation resist more than the highest do, death by alcohol would be a very common thing." If we replace the word "alcohol" by "alcoholic anæsthetic" in Dr. Jackson's remarks we arrive at the pith of our subject. It is, then, the sum and aim of the scientific use of anæsthetics to act upon the higher and more unstable centres of the nervous system without affecting the lower or automatic centres. But the problem cannot be narrowed down to this easily appreciated theorem. The inter-relations of the higher with the lower centres in highly differentiated animals are many and intimate. Dangers appear in every zone of narcosis, lest impulses become initiated which involve the stable centres through the unstable ones.

Under normal conditions the purely vital functions of life are controlled by the lower centres, and, indeed, in more humble animals are incapable of being influenced by higher centres. In man the cerebro-spinal axis can, and does, influence the processes of life in obedience to impulses from without which require some modification of the routine of life. The diver, for example, can control the automatism of his breathing; while under the influence of pain, of shock, or of subjective fear of pain the heart's action may be inhibited. Such interference, however, is seldom excited without voluntary connivance. The simple reflexes of life are controlled when the higher centres are working in health. As soon, however, as any disturbance of these centres occurs through, it may be, an "injurious agent," as Dr. Jackson calls it, there is a danger, and a very real danger, lest simple stimuli from without cause the most widespread reflex actions. Even those protective of the vital processes become, when unrestrained by limiting nervous control, incoördinated and make for the destruction of those very processes of life which it is their function to preserve. And, further, the due performance of the vital processes depends

[3] Comptes Rendus, June, 1885.
[4] Lyman's Artificial Anæsthesia, p. 327.
[5] Proceedings of the Physiological Society, November, 1895, and published in the Journal of Physiology, vol. xviii.: Action of Anæsthetics on Isolated Nerve.
[6] Comptes Rendus de la Société de Biologie, 1887.
[7] Archiv, i., 285.
[8] Les Anesthétiques, Physiologie et Applications Chirurgicales, p. 34.
[9] Comptes Rendus de l'Académie des Sciences, vol. xxiv., 1847.
[10] Archives Générales de Médecine, 1847.
[11] Croonian Lectures, THE LANCET, March 29th, 1884, p. 556. See also Dr. Lauder Brunton, who quotes Dr. Jackson, and applies his reasoning to the question of anæsthesia (THE LANCET, July 13th, 1895, p. 84).

upon not only nerve impulses and viscera and muscles—it requires that these shall be in such a condition of vitality that they can perform their physiological duties. It presupposes also that these shall be able to meet unusual calls made upon them; if, for example, the "injurious agent" at work be an anæsthetic which produces a sudden fall of blood pressure, for safety the controlling centres of the organism must be equal to some readjustment by which this vascular depression may be counterbalanced. It also necessitates that throughout the whole time of the action of the injurious agent the tissues of the body shall receive their due quota of nourishment. This last essential implies that the blood stream shall be maintained pure in sufficient circulation and capable of removing the products of tissue metabolism. A circulation capable of at once feeding and depurating tissues can only be one which passes through the lungs and there becomes subject to those gaseous exchanges which occur in physiological life. Nor is the problem as yet clearly before us. Elimination of the injurious agent is at least as essential as the due control of those safeguarding vital processes against which it militates. Take chloroform, for example. In persons whose chests are, through pulmonary emphysema, in a state of constant inspiration, the expiratory efforts are so ineffectual that the heavy vapour readily drops into the ever-patent air cells, and there accumulates until it reaches a tension which interferes with and threatens the mechanism of life. In the same way heart failure may occur in spite of a normally acting system of safeguards in the nervous system. If, in response to demands made upon the heart by impulses from the nerve centres that organ through disease is unable to execute the work required of it, fatal syncope arises.

Effects produced by Anæsthetics.

All anæsthetics in common use enter the blood stream through the lungs. The inhaled vapour in passing over the pulmonary mucous membrane produces changes in its epithelium which, according to McKendrick, Newman, and Coats,[12] are inflammatory in character: "The capillaries are contracted, their walls become less distinct, and the blood corpuscles in them become partially dissolved." These changes are, however, rendered less and less as the vapour employed is diluted more and more. It is probable that these effects are the result of an irritant as far as the epithelial cells and capillaries are concerned. The influence upon the corpuscles is, however, different, and, furthermore, varies in the case of different anæsthetics. In every case blood removed from the body and shaken with an anæsthetic shows destruction of the corpuscles and reduction with pouring out of the hæmoglobin. It would appear, also, that a similar if a less marked phenomenon occurs in the body. Da Costa[13] has demonstrated that "etherisation produces a marked diminution in the hæmoglobin of the blood." He finds, also, that with destruction of the red discs a change in the character of the leucocytes becomes apparent. I am at present investigating this point, and have up to the present time found that a decided diminution in the corpuscles takes place under nitrous oxide, ether, and chloroform. It is, however, not improbable that factors other than the anæsthetics may be found at work in bringing about the result. The combination or association between the gaseous anæsthetics or vapours and the constituents of the blood must be a loose one, since in their presence oxygen is displaced. Were they to form combinations as stable as that which carbonic oxide establishes, not only would the anæsthetic displace, but would render it impossible for the re-formation of, oxyhæmoglobin. Hence death must result. Whether or not in certain conditions the corpuscles have less power of again taking oxygen after prolonged anæsthetisation it is impossible to say. It seems that probably such is the case. Deoxidation of the tissues[14] at one time was thought to be the explanation of anæsthesia; we now recognise that this is not so, for among other reasons we can produce profound anæsthesia with hyper-oxygenation, and many deoxidating bodies have no anæsthetic properties. When it is remembered that the tissues are dependent upon the red corpuscles for their nutrition this question of their destruction by anæsthetics assumes a position of great importance. Hayem[15] has demonstrated that in anæmia and diseased states of the kidneys and liver the corpuscles are manifestly deficient in quantity and quality; and Haldane, working with Lorrain Smith,[16] has asserted that the corpuscles possess a different oxygen capacity. If, for example, one layer of these bodies can acquire and convey a certain amount of oxygen to the tissues, another will carry more or less, as the case may be. We have yet to learn how far pathological conditions affect this oxygen capacity of blood corpuscles. It is not impossible that the behaviour of anæsthetics towards the corpuscles, which it has been shown they affect so profoundly, may be such as to modify in a material degree their capacity for conveying oxygen to the tissues. The behaviour of anæsthetics towards corpuscles also illustrates a further and important point in our present consideration. There is a common tendency to accredit the central nervous system with absolute control over the vagaries of anæsthetics, to believe that if the ganglionic centres are keeping pace with the requirements of the organism no fear of danger need be entertained. Certainly in the case of chloroform this belief is delusive. That body is a virulent protoplasm poison. Ether and nitrous oxide also act upon undifferentiated protoplasm, and all anæsthetic agents are able to influence living tissue even when devoid of nervous connexions.[17] Pickering, working with the embryonic heart, has demonstrated that not only does chloroform act directly upon tissues when they are freed from nervous control, but so far differentiates between them as to affect them in various degrees, for while chloroform depresses the rhythm, causing diastolic stoppages of the auricle and ventricle, it proves itself much more toxic to the auricle than to the ventricle. Ether stimulates the embryonic heart, although very large doses will eventually stop it in diastole. The frog's heart, again, can be removed out of the control of the central nervous system, and can be again and again stopped with chloroform or ether when one or other of these is allowed to circulate through it in an adequate fluid; and while it is often impossible to restore it in the former case, it is difficult to kill it when ether is perfused. It must be, then, that these anæsthetics are able, quite independently of the central nervous system, to act upon corpuscular and muscular tissue. Thiem and Fischer's research indicates that chloroform can produce a change in the heart muscle which appears identical with fatty degeneration; while McWilliam[18] has proved that dilatation changes in the capacity of the heart as a whole follow immediately on the inhalation of chloroform. These changes are also influenced largely by the actual quantity of chloroform contained in the blood as well as the length of time it has access to the tissues. It is further probable that the changes which we know take place as a result of alcohol possess analogues in those brought about by anæsthetics, and so that the nervous tissue is also structurally affected by them. It appears, then, not improbable that the effects produced by anæsthetics upon the corpuscular elements of the blood may sooner or later be shown to produce those destructive changes in the muscle of the heart and other tissues which are found to undergo fatty changes as a result of inhaling chloroform &c. The lessened oxygen supply to these tissues may, it is hypothecated, produce such structural changes. Waller and others have demonstrated the changes in isolated nervous tissue, but as yet no full research has been conducted upon the nervous elements as they occur in the body. An attempt was made in this direction by me in working out the physiological action of nitrous oxide gas,[19] with results which, I think, proved the anæsthetic properties of that gas. It must then appear probable that the changes brought about in the blood elements react upon the more stable tissues by lessening their supply of oxygen while the tissues themselves are brought under the influence of the anæsthetic which the blood stream conveys to them. The next changes which are brought about by the anæsthetic are those connected with respiration, circulation, and nerve regulation.

In obedience to stimuli conveyed from the lungs, diminution of the amount of oxygen or its excess leads to corresponding respiratory efforts. In association with these are the somewhat complicated series of changes in the blood pressure, the cardiac rhythm, the dilatation and constriction of the capillary areas which go to form the

[12] Glasgow Commission on Chloroform, quoted by Dr. Lauder Brunton, op. cit., p. 85.
[13] The Blood Alterations of Ether Anæsthesia, by Dr. J. C. Da Costa, Medical News, Philadelphia, March 2nd, 1895.
[14] Practice of Artificial Anæsthesia, Brit. Med. Jour., Sept. 19th, 1885.
[15] Du Sang, 1885.
[16] Journal of Physiology, vol. xvi., p. 468.
[17] Ibid., vol. xiv., p. 446.
[18] Ibid., vol. xiii., p. 859.
[19] Transactions of the Odontological Society, 1887.

blood circulation. Not only may these be thrown out of gear by impediment to the pulmonary circulation arising from asphyxia, the commonest danger of anæsthetics, but they may be profoundly affected from without through skin or visceral stimuli, leading to disaster. Oliver,[20] by means of his ingenious instrument the arteriometer, is able to record changes in the size of the bloodvessels under various circumstances. He very kindly assisted me in some observations made at University College Hospital, and we found that during various stages of anæsthesia the pulling upon the intestines, the spermatic cord, &c., incidental to various operations upon viscera produced the most startling changes in the diameter of the radial artery. And these changes varied under different anæsthetics. This must indicate a profound series of impressions upon the control system. To my mind many disasters under anæsthesia are explicable by these observations. Under chloroform especially the shock conveyed by the removal of a tooth would, if the anæsthesia were not deep, in a certain number of cases produce reflex inhibition of the heart. That this reflex inhibition does occur has been proved by many observers, but the results of Amrus and Gärtner[21] are conclusive. Even where the animal is deeply anæsthetised they found weak faradaic currents applied to the vagus produced a very prolonged heart stoppage. When the heart pause had persisted for a certain time respiration also failed; slight spasms succeeded.

In the paper to which I have referred above Lauder Brunton insists upon a form of death under anæsthetics which is certainly a common one, and which, when recognised, must relieve anæsthetics of the responsibility in very many fatalities. Adopting Caspar's views, he attributes these deaths to neuroparesis.[22] Not only do circulation and respiration fail simultaneously, but all the nervous centres are instantly annihilated. The death is one from shock. It may follow shock from fear or injury; it may, and does, result from pain felt during imperfect anæsthesia, or even before any appreciable amount of the anæsthetic has been taken. I think a study of the cases of fatalities published will convince you that a large number of examples of death result from neuroparesis.[23]

Anæsthetics are, however, not simply dangerous *per se*. They too frequently have to be given to those whose tissues are already in a diseased condition. Take anæmia, fatty degeneration, "renal inadequacy," various functional and organic diseases of the ganglionic centres—of the heart—and cyanosis the result of obstructive pulmonary or cardiac diseases, as examples of the many pathological states which place a patient, even before taking an anæsthetic, in a condition which renders him especially liable to suffer from such phenomena caused by anæsthetics as destruction of corpuscles, irritative inflammatory changes in the epithelium of the lungs and kidneys, fatty changes in the heart, irregular and uncontrolled nerve storms. All such people are sometimes compelled to take an anæsthetic. In their cases not only must the rules be adopted in giving the anæsthetic which in the normal human being permit of the production of narcosis without interference with the vital processes of life, but full allowance must further be made for the crippled condition of their organs and tissues, so that they may, in spite of their disabilities, carry on life during and throughout the anæsthesia. This is the great problem, and this it is which taxes the knowledge, skill, and resource of the anæsthetist.

What, then, are the practical lessons our present knowledge teaches us? In general we must conclude that the action of the anæsthetic should be restricted within those clearly defined limits which involve only the higher ganglionic centres—that under no circumstances should incomplete anæsthesia be deemed sufficient for even the most trivial operation.

Of methods our present knowledge allows us to say much, but it is impossible for me to do more than indicate in the briefest way what rules should guide us. All methods involving asphyxial symptoms are open to grave censure. In the case of all anæsthetics it is possible to produce unconsciousness and yet to avoid cyanosis. Nitrous oxide gas, once thought to be an asphyxiant, is now known to be a true anæsthetic, and to be capable of being given with oxygen or air, and to produce peaceful anæsthesia without any asphyxial phenomena. Of ether the same is true. Of chloroform it must be said that any association between it and asphyxia must lead in the healthy subject to grave peril and in the diseased to fatal results.

A word further. Close study of the behaviour of anæsthetics makes me certain that all methods which employ a large quantity of anæsthetic substances are faulty. The pneumonia, the renal catarrh, the cardiac asthenia following anæsthesia are due, in most cases, not so much to the anæsthetic as to the unwary way in which it is employed. When anæsthesia is better understood, and those who employ anæsthetics recognise more the responsibility they incur, when the examining boards demand of their candidates at least a nodding acquaintance with anæsthetics and their uses, then will there be fewer fatalities and more commonsense practice of this branch of the healing art.

Mortimer-street, W.

[20] Pulse Gauging, 1895.
[21] Wiener Medicinischen Blätter, No. 20.
[22] Dr. Lauder Brunton: THE LANCET, July 6th, 1895, p. 23.
[23] On Nitrous Oxide Anæsthesia, British Journal of Dental Science, Oct. 11th and 15th, 1895; also Clinical Report on Deaths under Chloroform, THE LANCET, 1893.

ON

SOME POINTS IN PERNICIOUS ANÆMIA, WITH SPECIAL REFERENCE TO TREATMENT WITH BONE MARROW.

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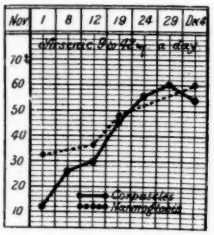
LATE HOUSE PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

AS house physician to Dr. Ringer in University College Hospital I have had the opportunity of examining the following cases. They seem to be worth recording, both because cases of pernicious anæmia, especially accompanied by the result of the necropsy, are interesting in themselves, and also because in these cases the blood was regularly examined in order to compare the results obtained by treatment with red bone marrow with those obtained by treatment with arsenic. The corpuscles were measured by means of Thoma-Zeiss's hæmo-cytometer, the percentage being calculated by comparing the number of corpuscles in a cubic millimetre with a normal of five millions in the two male cases and of four and a half millions in the case of the woman. The hæmoglobin was estimated by Gowers's hæmoglobinometer. The extract of red bone marrow which was given was prepared by splitting ox ribs along the middle and scooping out the soft cancellous bone in the centre, the meshes of which contained the red marrow. This was freed from bone spicules by pounding in a mortar with a little water and passing the watery extract through fine muslin. The extract obtained from two ounces of the bone marrow was given in the twenty-four hours.

CASE 1.—The patient, a man aged forty-five, was admitted with a history of feeling faint and giddy for the last five weeks. During this period he had also suffered from numbness and swelling of the feet, and from severe headache and shortness of breath. The digestion was bad, and on several occasions he had had slight attacks of hæmatemesis. For the last few weeks he had entirely lost the sense of taste. On his admission the mucous membranes were found to be extremely pale, the skin of the body, especially of the face, being of a lemon-yellow tint. There was slight wasting of the muscles and subcutaneous fat; there was no hyperæsthesia of the sternum and long bones; well-marked œdema of the ankles was present; the arteries were rather fibroid and pulsated visibly; there was a well-marked systolic murmur at the pulmonary cartilage, and a separate fainter systolic murmur at the apex; and well-marked retinal hæmorrhages were observed in both eyes. Examination of the blood showed that the red corpuscles were reduced to 12 per cent. and the hæmoglobin to 32 per cent.; the red corpuscles did not form *rouleaux* and exhibited a variety of shapes and sizes. The urine was of specific gravity 1012 and rather darker than usual; it contained no albumin; the total amount of urea in the twenty-four hours averaged 25 grammes; a well-marked band of urobilin was present. The patient was kept in just over a month; he had no medicine but arsenic, which was gradually increased from 9 to 42 minims a day. Under this treatment the blood rapidly improved, the corpuscles rising from 12 per cent. to 60 per cent. and the hæmoglobin from 32 per cent. to 60 per cent., as shown in the first chart, and at the same time the face and mucous

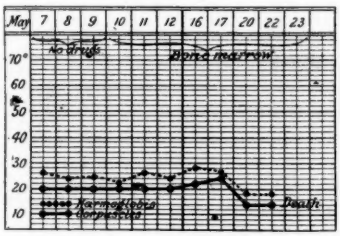
membranes became of a much better colour, while the digestion and shortness of breath improved. He then went back to work, taking twenty drops of liquor arsenicalis a day. Five months later the patient was readmitted, complaining that all his old symptoms had returned during

FIG. 1.



the previous month. His condition was then much as before. There were fresh retinal hæmorrhages in both eyes, and the remains of the old ones could be seen. There was also a large number of submucous hæmorrhages about the size of a pin's head on the under surface of the tongue. The corpuscles varied very much in shape and size, and a large number of small rather deeply coloured ones were seen. After four days the treatment with red marrow was begun, and this was continued up to the end. As shown in the second chart the blood condition remained nearly stationary until a few days before death, when there was a distinct fall. For the first few days he felt slightly stronger, but during the last week he relapsed somewhat, and had a good deal of vomiting, but no diarrhœa. The temperature, which at first never rose

FIG. 2.



above 100° F., touched 101° on most days during the last week. Death was quite unexpected, and occurred apparently from cardiac failure.

Necropsy.—There was a fair amount of bright yellow subcutaneous fat; the muscles were of good colour. There was some excess of fat round the pericardium and on the surface of the heart. The blood was paler than usual, watery, and did not clot. There were a few subserous hæmorrhages over the ventricles, more in the auriculo-ventricular groove, and a great many over the surface of the right auricle. There were a great many hæmorrhages under the endocardium of the right auricle, and on the section they were seen in muscular tissue of the right auricle. There were a few hæmorrhages about the size of a pea scattered through the lung tissue, and two or three under both layers of the pleura as well as under the parietal peritoneum. No hæmorrhages were found in the muscles or solid organs, so that the loss of blood caused by the few visceral hæmorrhages, both in this and in the next case, would not account for the anæmia, as was recently suggested by Dr. Stockman.[1] The heart muscle was pale and evidently extremely fatty, and much softer than natural; the cavities of the heart were not dilated; the mitral orifice admitted three fingers; there was some deposit of fat in the edge of the valve. There was no excess of fluid in the pleura; the lungs were œdematous. The liver and kidneys were very fatty; both gave marked reaction for iron on staining with ferrocyanide of potassium and dilute hydrochloric acid, the iron granules being chiefly in the periphery of the lobules of the liver and in the convoluted tubules of the kidney. The stomach was normal. Microscopical sections showed the glands to be also normal. The intestines were likewise normal and contained no worms. On dividing the middle third of the shaft of the femur the marrow was seen to be pink and gelatinous, and in some parts of a deep crimson colour. The bony trabeculæ, which normally occur in the medulla of the bone, were almost entirely absent. The marrow was examined microscopically. Instead of consisting entirely of fat globules bound together by connective tissue containing a few marrow cells, as is usual in the marrow of the shafts of healthy bone, it was seen to be made up mostly of a large number of colourless marrow cells such as normally occur in the red marrow. There were some scattered fat globules and also a large number of nucleated red corpuscles, most of which were of the same size as a normal red corpuscle, but some of them were two or three times as large. Many of them were undergoing division, but the formation of new red corpuscles by a process of gemmation from a large nucleated red cell, as described by Dr. Mott in the marrow of a case of pernicious anæmia,[2] was not seen. In the deep crimson areas was a large number of irregularly-shaped, non-nucleated red corpuscles, such as were seen in the blood during life, these darker areas being probably due to hæmorrhage into the marrow substance. These results agree with the changes found in moderately severe anæmias in the few recorded cases. Rindfleisch, in a very severe case, found the colourless marrow cells to be few in number, their place being taken by an enormous number of nucleated red corpuscles, some of which were of very great size, exceeding a normal corpuscle by as much as six diameters. The same results were obtained by Muir in five cases of pernicious anæmia.[3] He also found that in the most severe cases there was a more marked increase in the red corpuscles, both nucleated and non-nucleated, in the marrow, the increase being at the expense of the fat cells and the colourless marrow cells. It was also in these severe cases that the great number of the large nucleated red corpuscles was found. Many observers, especially Neumann, Litten, and Orth, have found similar changes in animals after bleeding, so that the most recent authorities consider that the change in the marrow is not the cause of the anæmia, but is rather an attempt to produce new corpuscles to compensate for the deficiency.

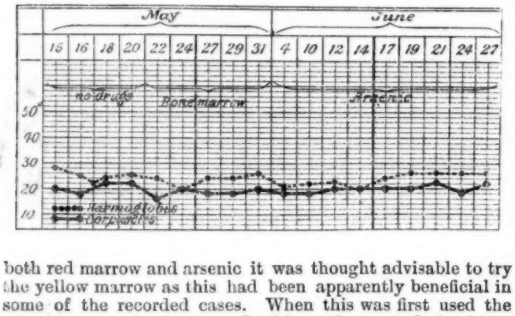
CASE 2.—The patient, a man aged sixty-seven, was first admitted in November, 1891. The history was that he was quite well until fifteen months previously, when he had a severe attack of diarrhœa. Since that time he had been getting weaker, and had also suffered from occasional attacks of excessive diarrhœa. For the last three months his legs had been swollen and he had been very short of breath on exertion. He was kept in the hospital for a month and treated with arsenic, during which time the corpuscles rose from 29 per cent. to 40 per cent., and the hæmoglobin from 39 per cent. to 42 per cent.; at the same time the patient's strength and general condition improved. For the next three months he continued to work, but then the debility, œdema of legs, and shortness of breath began to return, and he was readmitted in May, 1892. He was treated with arsenic, but, owing to the frequency of severe vomiting and diarrhœa, it was only given in small doses and had frequently to be discontinued. During the month he was an in-patient there was no improvement, the corpuscles remaining about 25 per cent. and the hæmoglobin about 35 per cent. He was then sent to a convalescent home, where he improved greatly and was able to return to work. He remained at work for two months, when the old symptoms returned, and he was readmitted in February, 1893. He was an in-patient for slightly over a month, during which time he was taking twelve minims of liquor arsenicalis a day without any gastro-intestinal symptoms. The corpuscles rose from 15 per cent. to 40 per cent., and the hæmoglobin from 35 per cent. to 42 per cent. He then kept fairly well for eighteen months, when he relapsed, the vomiting and diarrhœa being especially severe. He also stated that whenever the bad symptoms appeared the yellow colour of the skin became marked. On his admission in May, 1895, the patient was found to be considerably wasted; the skin

[1] Brit. Med. Jour., May 11th, 1895.

[2] Practitioner, August, 1890. [3] Journal of Pathology, 1894.

had a yellow earthy tint, and in many parts, especially at the flexures and over the abdomen, was deeply pigmented; there were also many round pigmented patches on the trunk. There were about fifteen small subcutaneous hæmorrhages over the chest and abdomen; some œdema of the feet existed; the mucous membranes of the lips and tongue were of a faded yellow colour, and there were a large number of submucous hæmorrhages on the under surface of the tongue. He was dull and apathetic, and often wandered in his speech. The blood looked pale when drawn; the corpuscles did not form *rouleaux*, and there were many poikilocytes. The corpuscles averaged 20 per cent. and the hæmoglobin 28 per cent. The urine was distinctly darker than usual, of specific gravity 1008, contained no albumin, and gave a well-marked band of urobilin. A faint systolic murmur was heard at the second left cartilage, and none at the apex. Systolic murmur was easily produced in the carotids and femorals by slight pressure. There was no venous hum. The temperature was normal except on one day, when it rose to 102° F. The discs were pale; there were no hæmorrhages. The patient was kept for a week without drugs, and the blood was estimated on alternate days and found to remain fairly constant. He was then put on the red marrow for a fortnight, during which time he became more depressed and seemed to be losing strength. As there was no improvement in the blood condition, as shown in Fig. 3, it was not thought safe to continue with the marrow as long as was intended. He was then put on arsenic, which he had been taking for four weeks, except for a few days when it was omitted on account of diarrhœa and vomiting. The amount taken had varied from eighteen to thirty drops a day. There was no improvement in the blood-condition and the patient's strength and mental condition were no better. As he was evidently getting worse under

FIG. 3.

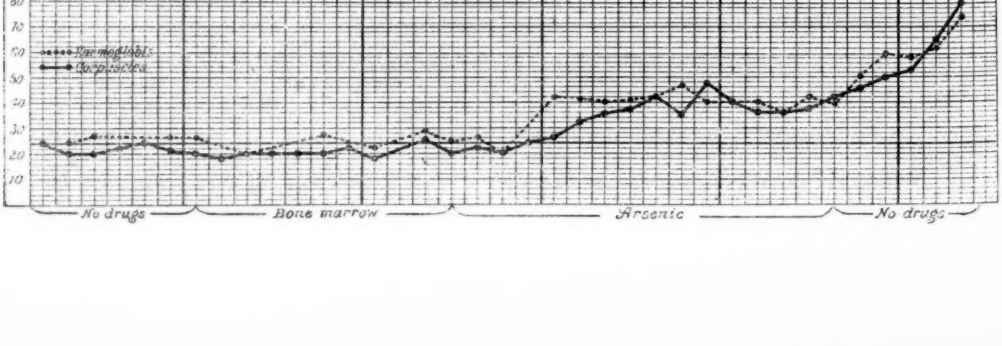


both red marrow and arsenic it was thought advisable to try the yellow marrow as this had been apparently beneficial in some of the recorded cases. When this was first used the patient was quite prostrated with weakness and the heart was evidently getting weaker; it was given for four days without affecting in any way the gradually increasing prostration and cardiac failure, from which the patient died. During the time he was taking the yellow marrow the blood was not examined as the slightest prick seemed to be very distressing to him.

Necropsy.—There was marked absence of subcutaneous fat; the muscles were much wasted, but were of good colour. The blood was pale and watery; no hæmorrhages were found under the pleura, pericardium, endocardium, and peritoneum, and none were seen in the solid organs or muscles. Two layers of pericardium were adherent. The cavities of the heart were not dilated; the heart-muscle was extremely fatty; well-marked "tabby-cat" striation was seen, especially in the left ventricle. The lower lobes of both lungs were extremely œdematous, breaking down readily under pressure, and were apparently in an early stage of pneumonia, probably caused by the difficulty of expectoration and the cardiac failure. Slices of the liver, spleen, and kidneys became deep-black in colour when placed in a solution of ammonium sulphide; this was especially marked on comparing the staining in this case with that in the organs of a case of pneumonia which had been examined in the same way. Sections of the liver stained with ferrocyanide of potassium and hydrochloric acid, examined microscopically, showed a number of deep-blue granules in the periphery of the lobules. The supra-renal bodies were normal. The stomach was contracted, but otherwise normal; the intestines were normal. No hæmorrhages were found under the membranes of the brain, but a few pin-point hæmorrhages were seen in the white substance. The backs of both eyes were removed; there was no retinal hæmorrhage. The bone marrow from the middle of the shaft of the femur was deep-red in colour and gelatinous. Microscopical examination showed marked diminution in the fat globules with great excess of the marrow cells, with the presence of many nucleated red corpuscles.

CASE 3.—A woman aged forty-nine was brought to the hospital in a fainting condition. The history was that she had been getting weaker for the last six months; during this time she had had several fainting fits, to which she had not previously been subject. Lately she had been suffering from shortness of breath, swelling of the legs, and pain in the forearms and over the shins. She also stated that she had been losing flesh. On examination the mucous membranes of the lips and eyelids were found to be almost colourless. The skin was of a yellow saffron colour. The conjunctivæ were quite white. The muscles were flabby, but not wasted. The blood was pale; the corpuscles did not form *rouleaux*, but ran into groups; many were irregular in shape, and some had one or more processes. There was a large number of small, deeply coloured corpuscles. The corpuscles averaged 22 per cent. and the hæmoglobin 24 per cent. The heart's impulse was diffuse and slapping. At the apex there was a systolic murmur, followed by a faint diastolic murmur, the latter being strictly localised to a small area just inside the nipple. A separate systolic murmur could be heard at the base, being louder on the left side. The urine was alkaline, even when first passed, with no excess of pigment and a faint cloud of albumin. It was examined by Dr. Vaughan Harley, who found no pathological urobilin of MacMunn, but when using Garrod's caustic soda method there was a marked increase in the hæmatoporphyrin; the urea averaged twenty grammes per diem. There were no submucous or retinal hæmorrhages. There was well-marked hyperæsthesia over the sternum and tibia on light percussion. She had occasional vomiting, but no diarrhœa. The temperature often rose over 100° F., and on several occasions had been over 101°. She was kept for a week without drugs, and was then put on extract of red bone marrow. This was continued for three weeks without any improvement in the blood state or

FIG. 4.



in the general condition. She was then put on arsenic, beginning with nine minims of the liquor and rapidly rising to seventy minims a day. One week after the commencement of the treatment a faint pink flush was noticed on the cheek, and she was able to sit up in a chair for the first time. The slow, but almost continuous, improvement in the blood is shown in Fig. 4, the corpuscles rising from 20 per cent. to 43 per cent. and the hæmoglobin from 26 per cent. to 43 per cent. in three weeks. On June 10th she first noticed a slight cough; this grew very troublesome during the next week, keeping her awake at night; it became much better about the 19th. It is interesting to note that the blood chart shows that the rise stopped during this period and there was even a distinct fall at the commencement, the blood beginning to improve again as the bronchitis passed off. The patient continued to take the arsenic for four weeks without any vomiting, diarrhœa, or other toxic symptoms. She then began to have a feeling of numbness and tenderness in her hands, with some weakness and loss of sensation. The arsenic was immediately stopped, but two days later she had the tingling and numbness in her legs, with some loss of sensation; at the same time the knee-jerk was lost and there were distinct wrist-drop and ankle-drop. In a week the tingling sensation had almost entirely disappeared, and she had regained sufficient power in her legs to be able to walk; the paralysis, which was evidently due to a peripheral neuritis, had gradually passed off. Her general condition was very good, and she felt much stronger. Examination of the blood showed the corpuscles to be almost normal in shape, only one or two pear-shaped forms being seen in a field. It was noticeable that the improvement in the blood which was started by the arsenic continued after this had been omitted, the corpuscles in fourteen days rising from 42 per cent. to 80 per cent., and the hæmoglobin from 40 per cent. to 75 per cent., when the observations were discontinued.

Remarks.—There does not seem to be much doubt that these were three cases of genuine pernicious anæmia. In none of them was there any history of previous loss of blood, and careful examination failed to reveal any other diseases, so that they would not come into the category of secondary anæmias. The blood in each case was fairly typical; it exhibited in all the relative excess of the hæmoglobin compared with the corpuscles, which according to Hunter is the only characteristic feature of the disease; poikilocytosis was also so marked as to point to the anæmia being probably pernicious. No nucleated red corpuscles were seen in the blood, but it is apparently not common to find these unless films of the blood are dried and stained. In none of them was there any excess of the white corpuscles. In two of the cases the urine was distinctly darker than usual, and in the case in which it was light excess of hæmatoporphyrin was found. In one case there was very marked reduction of the urea; in none was there a noticeable deposit of uric acid crystals. In two of the cases gastro-intestinal disturbances were marked features. The cardiac condition is of interest. All the cases were carefully examined for increase of cardiac dulness, as described by Dr. A. Foxwell[4] in cases of debility; but in none of them was any dilatation of the heart detected. All three cases presented a well-marked systolic murmur at the base on the left side, and in two of them there was a systolic murmur at the apex, all these murmurs being evidently due to the anæmia. In the third case there was an early diastolic murmur accurately limited to a small area just inside the apex, which is hard to account for. It evidently was not due to mitral obstruction, as it disappeared as the anæmia became less. Eichorst describes three cases of pernicious anæmia in which diastolic murmurs were heard, but all of these were at the base, and Dr. Sansom explains these cases as being due to a continuous venous hum produced in the vessels of the neck, the hum being overpowered during the systolic period by the murmur, but audible during the diastole. This could not have been the case here, because the murmur was only heard in the first part of the diastole, and, further, because it was not heard at the base of the heart. In all the cases it is noted that the veins at the base of the neck were full and pulsated, but that this pulsation was not due to any cardiac change is shown by the fact that they collapsed with the systole of the heart. In none of the cases were there any ataxic or spastic symptoms such as have lately been described as due to sclerosis in the posterior or lateral columns of the spinal cord in cases of pernicious anæmia. In only one of the cases were there retinal hæmorrhages to be detected, but in two of them there were very well-marked hæmorrhages under the mucous membrane of the under surface of the tongue, nothing resembling which was seen in a large number of patients suffering from other diseases, so that it might be useful to look beneath the tongue as an aid to diagnosis in those cases in which an examination of the eyes is not convenient. As regards the result of the treatment it will be seen that the red marrow did not have the slightest effect in any one of the three cases, one of which began rapidly to improve as soon as the patient was treated by arsenic. Goldscheider of Berlin was apparently the first to use the extract of bone marrow. He gave it by hypodermic injections to a patient suffering from pernicious anæmia; there was no improvement, and the patient died. Dr. Dixon Mann[5] published four cases of chlorosis and secondary anæmia which he successfully treated with extract of red bone marrow, given by the mouth. Dr. Fraser[6] first published a case of pernicious anæmia which had greatly improved under a prolonged course of bone marrow, which was given continuously, arsenic, iron, and salol being given with it at different periods. Dr. Barrs[7] has described a case in which arsenic was given without affecting the anæmia till paralysis was produced; bone marrow was then given with extremely good effects. In the same paper, however, another case of pernicious anæmia was mentioned in which there had been no improvement under bone marrow. Dr. Stockman[8] reported a case treated with bone-marrow, the percentage of corpuscles and hæmoglobin sinking under the treatment. In the same number another case was reported by Dr. W. B. Drummond in which there was some improvement under bone marrow, but a greater effect when arsenic was given in addition. Dr. Daneforth[9] reported a case cured by the administration of bone marrow and arsenic together. Dr. Billings[10] fully reported two cases treated with red bone marrow and arsenic successively. In one case there was no improvement with either, and the patient died; in the other there was no improvement with bone marrow, but the patient got better readily under arsenic. These cases only include those of pernicious anæmia which have been treated with bone marrow; cases of chlorosis and leucocythæmia are also reported which have done well under the same treatment. Of these twelve cases of pernicious anæmia, including the three reported above, treated with bone marrow, two may be excluded, as arsenic was administered at the same time; of the remaining ten cases, eight did not improve under marrow, two of them afterwards doing well under arsenic, while two, the cases of Dr. Fraser and Dr. Barrs, were greatly benefited by the bone marrow. The conclusion to be drawn seems to be that bone marrow should not be given unless a thorough course of arsenic has been given and has failed. One reason for the different results obtained in different cases may be the well-known difficulty in diagnosis in this disease, as a case may be universally supposed to be one of pernicious anæmia till death occurs, when some deep-seated disease, especially affecting the stomach or intestines, may be discovered which has caused the anæmia. Another may arise from the differences in the bone marrow. If it is obtained direct from the butcher it is almost certain to be white marrow from the shafts of the long bones, consisting of little else than fat, the red marrow, which is a blood-producing organ, occurring only in the ribs and cancellous ends of the bones, and requiring to be extracted from the bony meshwork in which it lies, so that in all reported cases the source from which the marrow has been obtained should be particularly stated.

It is difficult to explain in what way any good effect could be produced by the administration of bone marrow in pernicious anæmia. Two suggestions might be made, corresponding to the two theories that the changes in the bone marrow found post mortem are either the result or the cause of the disease. If the first view is taken, that the change in the marrow is due to its over-action in its endeavour to manufacture new red corpuscles, it might be supposed that the marrow which is administered either might help to form new corpuscles or else might contain some substance which

[4] THE LANCET, Nov. 14th, 1891.

[5] THE LANCET, March 10th, 1894.
[6] Brit. Med. Jour., June 2nd, 1894.
[7] Ibid., Feb. 16th, 1895. [8] Ibid., May 17th, 1895.
[9] Chicago Clinical Review, 1894.
[10] Johns Hopkins University Gazette, March, 1895.

would act as a stimulant to the blood-forming organs. It would, however, be very difficult to believe that the marrow of an animal taken into the stomach and digested could form new corpuscles, and, as the only tissue which is supposed to form new red corpuscles in the adult—i.e., the red marrow—is already greatly increased, any substance greatly stimulating this tissue to increased action would be useless. If the other view is taken, that the changes in the bone marrow are in some way the cause of the disease, it might be thought that the administration of marrow extract might supply some deficiency, in the same way as the administration of thyroid gland extract supplies some deficiency in myxœdema. But it is contrary to the general opinion to suppose that the changes in the marrow are the cause of the disease, in the same way that the atrophy of the thyroid gland is the supposed cause of the myxœdema. Supposing it is the cause, the red marrow in these cases is hypertrophied, not atrophied, so that there is no deficiency which can be compensated by giving the extract.

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A CASE OF HÆMORRHAGE INTO THE GREAT OMENTUM.

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THE following case is of some interest as an example of peritoneal hæmorrhage.

A young man aged twenty-five years was admitted to the Bristol Royal Infirmary, under the care of Dr. Henry Waldo, on May 16th, 1894, complaining of pain in the left side of the chest, which had commenced four days previously. The temperature was raised, and there was dulness at the base of the left side of the chest. He suffered from varicose veins of the legs, and an ulcer was present above each outer ankle. For six or seven days he remained in much the same condition. The temperature ranged between 100° and 102° F., the respirations were 40 to the minute, and the pulse 120. At the end of that time he commenced to complain of abdominal pain and tenderness. Peritonitis was thought probable, and the question of its being suppurative was considered. Twelve days after admission he was transferred to my care. The following day an incision was made in the middle line of the abdomen about midway between the pubes and the umbilicus. The veins cut by the incision were varicose and there was profuse hæmorrhage. All bleeding having been stopped with artery forceps and the incision slightly enlarged it was found that there was a large dark mass occupying the position of the omentum. It consisted of omentum caked with blood. It was attached to the colon. The veins in the omentum were much dilated, some being as large as the patient's thumb and evidently filled with fluid blood, looking at first sight like gangrenous empty small intestine. On the hand being introduced into the abdominal cavity a quantity of dark-coloured purulent blood escaped. No ruptured vein could be found, and as the hæmorrhage had evidently ceased the omentum was returned into the abdomen. The peritoneal cavity was flushed out with warm boracic lotion by an irrigator; a glass drainage-tube was inserted at the lower end of the wound, and the parietes brought together with silkworm gut. After the operation the patient complained of much less pain, and his general condition improved a good deal for the first twenty-four hours, but after this his pulse gradually failed, and he died of syncope two days after the operation.

Necropsy.—A post-mortem examination was made by Mr. H F. Mole, house physician to the infirmary, who was acting as pathologist at the time of the patient's death. The great omentum and the surrounding organs were removed and kept. The specimen showed a mass of blood-clot about the size of the closed fist, situated below the great curvature of the stomach and above the transverse colon. This mass was intimately connected with the great omentum, but it was not easy to say between which layers it was confined. Whether situated in some small secondary cavity between the ascending and descending divisions, or whether between the layers of peritoneum that form one of those divisions, was not clear. One point, however, was evident: that the mass of blood-clot was much more closely connected with the transverse colon than with the stomach, and it seemed probable that the hæmorrhage started between the layers of peritoneum attached to this portion of the large intestine. One feature that was at once obvious was of interest. A large hæmorrhage was situated between the stomach and the transverse colon, and yet did not occupy the lesser peritoneal cavity, to which cavity it now seems the custom to ascribe collections of fluid that present anteriorly between the stomach and the colon. This hæmorrhage was not the only one, others about the size of hazel nuts were situated lower down between the layers of the great omentum, and one much more extensive behind the peritoneum. Mr. Mole thus described this last blood effusion: "A thick mass of firm clot was found overlying the left kidney and surrounding the spleen; the mass was firm and heavy, and a clean section of it could be made." The mesentery was unaffected. No ruptured vessels from which the blood could have escaped were found. Other points of interest were the size of the spleen, which weighed 14½ oz., and the presence of 30 oz. of fluid in the left pleural cavity with adhesion of the lung to the diaphragm and pericardium. The specimen showed no effusion of blood into the coats of the colon, and the post-mortem notes made no mention of the existence of such a feature in other parts of the intestines. This fact seems to exclude thrombosis of the mesenteric vessels as a probable explanation of the hæmorrhage, since in cases of thrombosis of these vessels the hæmorrhage is almost entirely limited to the walls of the intestines. The presence of large veins in the omentum suggest that the hæmorrhage may have arisen in rupture of one of them, but against such a view is the fact that there were other hæmorrhages which had no connexion with the one we have been considering. The obscure illness, with rise of temperature, which existed some days before symptoms of abdominal disease developed seem to point to some pathological series of events less simple than would be occasioned by a primary rupture of an abdominal vein. In our ignorance of its precise nature we may place the case in the category of the ill-understood instances of hæmorrhage into the peritoneum that occur from time to time.

Bristol.

RECOVERY IN HÆMORRHAGIC SMALL-POX.

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AND
W. S. FRITH, M.B., B.C. CANTAB.,
LATE SENIOR ASSISTANT MEDICAL OFFICER OF THE HOSPITAL SHIPS.

IN THE LANCET of Jan. 4th there appeared an interesting communication from Dr. Frank Robinson on a case of small-pox in which hæmorrhagic symptoms developed. The patient was extremely ill, but after a short illness rapidly recovered. The question was raised whether the unusual course of the illness could be explained on the hypothesis that the case was an example of hæmorrhagic small-pox modified by vaccination. From time to time cases of small-pox occur in which the primary illness is unusually severe, and certain symptoms suggestive of the hæmorrhagic variety of the disease are present, yet not infrequently they have a favourable issue. In such cases as we refer to there are no definite signs of hæmorrhage, or if hæmorrhage occurs it is merely in the form of diapedesis in the inflammatory areolæ of the pocks, of a staining of the bases of some of the vesicles, of a few scattered petechiæ in the skin, of some hæmorrhage into the conjunctiva, or of an unusually well-marked petechial prodromal rash over the flexor surface of the trunk. The existence of any of these symptoms does not *per se* imply that a case is of the hæmorrhagic variety, or even necessarily indicate an unfavourable prognosis. Although in such cases the papular rash may be extremely profuse and there may be a fatal issue, on the other hand, the rash may be scanty and convalescence rapid. Between cases presenting such slight signs of hæmorrhage and cases of undoubted and rapidly fatal hæmorrhagic small-pox, according to our experience, no hard-and-fast line can be drawn. This being so, as might be expected, cases occur as to which it is extremely difficult to say whether they would

be more accurately described as cases of hæmorrhagic small-pox or not. Such cases as these usually prove fatal, and then the question is purely an academic one. Sometimes they recover, and one is inclined to look on any slight evidence of hæmorrhage as accidental; but in rare cases the signs of hæmorrhage are very well marked, and yet recovery takes place.

Such a case was that of a man who came under the care of one of us on the fourth day after he was taken ill. He was twenty-one years of age, had been vaccinated in infancy, and had six large vaccination scars. There was present when he came under observation a fairly plentiful, discrete, papular small-pox rash. He had profuse hæmaturia, vomited some slightly blood-stained material, and there was oozing of blood from the gums. He was greatly prostrated and his mental faculties were in partial abeyance. The lower part of the abdomen was covered by a profuse erythematous and petechial rash, which also extended across the back. Although the condition of the patient appeared to be so grave, the facies and general appearance of the patient differed from that usually present in cases of hæmorrhagic small-pox, and a cautious prognosis was given. In the course of two or three days all signs of hæmorrhage disappeared, and the man rapidly recovered, there being no secondary fever. No albumin was afterwards found in the urine. There was never any other sign of nephritis, and there was no history of the patient having previously suffered from hæmaturia. An attack of nephritis occurring in the course of a case of small-pox is extremely rare, and we have never known it to occur at such an early stage of the disease.

It will be seen that this case is very similar to that described by Dr. Robinson. It is suggestive that both patients were vaccinated, and that in neither case was the papular rash abundant. Although it would not be accurate to say that in all cases of hæmorrhagic small-pox the papular rash when it occurs is abundant, such is undoubtedly the case in general. We doubt, however, whether the explanation Dr. Robinson offers is the true one, but we are not prepared to discuss the difficult question whether or to what extent vaccination has the effect of altering the course of events in cases of hæmorrhagic small-pox.

Hospital Ships, near Dartford.

CASE OF CHRONIC TETANUS TREATED BY TIZZONI'S ANTITOXIN; RECOVERY.

BY H. EUGENE TRACEY, M.B., L.R.C.P. LOND., M.R.C.S. ENG.

ON Nov. 16th, 1894, I was summoned to see a girl aged seven years who was supposed to have "something wrong with her face." I ascertained that a fortnight previously she had sustained two slight burns, one on the forehead and the other on the left leg, the scars of which were still visible. On Nov. 14th it had been noticed that the child could not fully open the left eye and that she appeared to be smiling continually. On examination I found tonic spasm of the orbicular muscle of the left eye, which was marked enough almost to bring the eyelids together; well-developed risus sardonicus, more marked on the left side of the face; rigidity of the muscles of the neck, back, legs, and abdomen, producing extension of the head, and moderate opisthotonos. The patient could separate her teeth for almost half an inch, could swallow small quantities of liquid, and speak indistinctly. The temperature was normal. I prescribed bromide of potassium (ten grains every four hours) and absolute rest and quiet. On Nov. 17th the patient had a severe spasm in which the chest was fixed and the face black, the temperature rising to 99·8°F. On the 18th another convulsion had occurred during the night, and one also occurred in the afternoon. The temperature was 99°. In the evening I administered hypodermically one-eighth of a grain of sulphate of morphia as she refused to take medicine by the mouth. On the 19th she had been taking very little nourishment. This induced me to try to pass a soft red rubber tube by the nose for feeding purposes, but as this attempt immediately produced a convulsion I had to desist. In this convulsion the body was held rigid, the face was contorted and livid, and the respiration was suspended. I succeeded in giving a nutrient enema of milk treated with Fairchild's powder, which was retained, and during the day I administered hypodermically two tabloids, each containing one-eighth of a grain of sulphate of morphia. On the 20th the patient had been taking more nourishment during the night, but during the day she was not so well, having had two serious convulsions. On the 21st, at 6 A.M., I was summoned, as the patient had had two further convulsions. I administered a quarter of a grain of sulphate of morphia. At 5 P.M. she had another convulsion, and at 8 P.M. yet another, owing to changing the draw-sheet. I then administered the first dose of Professor Tizzoni's antitoxin (obtained from Messrs. Allen and Hanburys), injecting one and one-eighth of a gramme under the skin on the inner side of the thigh, using a syringe kindly lent to me by the British Institute of Preventive Medicine. On the 22nd, at 8 A.M., I was again summoned, and found that the patient had had nine convulsions during the night, recurring (according to the attendant's statement) at almost exact intervals of one hour. I witnessed a fit myself, the pulse being 80 before and 150 afterwards. I injected a second and similar dose of antitoxin. The child was somewhat delirious after this injection, and continued to have fits all day at intervals of from five to ten minutes. I was sent for again at 5 P.M., and the patient had a fit just after my arrival. By holding her hand and speaking soothingly to her when the clonic spasms were beginning to spread over the muscular system I succeeded in so far modifying their severity that there was no recurrence of the lividity of the face, foaming at the mouth, or rigidity of the chest walls. The temperature was 100·8° and the pulse 116. Before leaving I succeeded for the first time in moving the child on to a sofa in order to have the saturated bed linen changed. I again injected one-eighth of a grain of sulphate of morphia, but administered no antitoxin. On the 23rd, at 11 A.M., the pulse was 112 and the temperature 102·5°. No fits had occurred during the night, but frequent clonic spasms. At 5.30 P.M. the pulse was 80 and the temperature 100·5°. No recurrence of fits supervened. I injected five-sixteenths of a gramme of antitoxin. On the 24th the pulse was 68 and the temperature 98·6°. Frequent clonic spasms were occurring. I administered one-eighth of a grain of sulphate of morphia. At 8.30 P.M. I administered five-sixteenths of a gramme of antitoxin. On the 25th, at 10 A.M., the clonic spasms were of frequent occurrence. From 8 to 10 P.M. they recurred every quarter of an hour. I injected the sulphate of morphia as before, and five-sixteenths of a gramme of antitoxin. From the 26th to the 30th, the supply of antitoxin being exhausted, the treatment resolved itself into the daily injection of morphia and atropine, but the child made little or no progress. On Dec. 1st, having obtained another bottle of antitoxin, I recommenced the daily injections, administering five-sixteenths of a gramme every evening for a period of seven days. Meanwhile the condition of the patient improved rapidly, the clonic spasms diminishing both in force and frequency and some relaxation of the tonic contractions of the muscles taking place, specially of those of the neck, jaws, and face generally. At the end of the week the improvement was so marked that I ceased to inject either antitoxin or sulphate of morphia. Recovery was completed without further incident, the rigidity of the muscles disappearing some days after she had ceased to be troubled with clonic contractions.

Apparently in this case the most noteworthy feature of the action of the antitoxin beyond its general beneficial and curative effect was the strong reaction the first large subcutaneous injection caused, the pulse and temperature of the patient rising and the fits being temporarily increased both in virulence and frequency.

Willand, Cullompton, Devon.

MISSION TO THE DEEP SEA FISHERMEN.—Mr. F. W. Willway, M.R.C.S., a Bristolian, who has recently returned from Labrador after spending eighteen months in medical mission work there, gave an interesting lecture in Bristol last week, narrating some of the difficulties and hardships of the work. He described the coast journeys in the mission vessel in these dangerous waters, and his itinerary mission journey of last winter, when with sledge and dogs he covered 1200 miles.

UNILATERAL ORCHOTOMY FOR ENLARGEMENT OF THE PROSTATE.

BY C. W. MANSELL MOULLIN, M.D. OXON., F.R.C.S. ENG.,
SURGEON TO THE LONDON HOSPITAL, EXAMINER IN SURGERY AT THE UNIVERSITY OF OXFORD, ETC.

I HAVE recently had occasion to remove the median lobe of the prostate from a patient nearly sixty years of age who was to all intents and purposes a monorchid. Shortly after birth the left testis had been subjected to a proceeding similar to bistourage at the hands of an attendant and, as a consequence, it had wasted away. The cord could be traced a short distance down from the external ring, but there was no sign of testis or of epididymis. The symptoms for which the patient consulted me were characteristic of median valvular enlargement of the prostate. The residual urine amounted to ten or twelve ounces in spite of the fact that the bladder retained a fair amount of muscular power. So long as the patient was lying down and made no particular effort micturition was easy. If, however, he stood upright, and especially if any vigour was thrown into the attempt, the stream of urine stopped abruptly. Examination by the rectum showed but little change in the apparent size and relations of the prostate. The prostatic portion of the urethra was, however, more than two inches in length, and a metal catheter could not be passed without depressing the handle to a very considerable extent. A median incision was made into the urethra through the perineum, and the diagnosis confirmed by digital exploration. There was a pedunculated median outgrowth, nearly the size of a pigeon's egg, hanging in the orifice of the bladder and acting like a ball-valve. The lateral lobes were but little enlarged and were practically equal in size.

This case is of much interest in connexion with the question of the treatment of overgrowth of the prostate by unilateral orchotomy. It shows definitely that the removal of one testis, even in early infancy, will not prevent obstructive enlargement of the prostate later in life. It is to be noted, however (and the fact may prove to be of some importance), that the removal was effected subcutaneously by absorption, and that the cord was not divided high up and ligatured as in the operation of castration. The results, so far as the prostate is concerned, of removal of the testis alone and of removal of the testis and a great part of the cord by operation may be identical, but though it is usually done this should not be assumed without further evidence. The improvement that has taken place in some of the cases in which unilateral orchotomy has been performed is probably to be explained by the differences in the development and growth of the prostate in different individuals. In man the prostate is in its inception essentially a double organ, as it is in many of the lower animals. In them it is developed in connexion with the vasa deferentia, and the two sides remain more or less distinct. In man the seat of origin, like that of the ureters, is displaced until the gland tubules appear to be connected with the urethra rather than with the ejaculatory ducts; and the two halves approach each other until, like the uterus in the opposite sex, they fuse together. The degree to which this fusion takes place—and it varies very much in different people—is in all probability a measure of the extent to which each testis controls the whole gland. In patients in whom the enlargement is confined strictly to the lateral lobes the unilateral operation may succeed. In those, on the other hand, in whom there is a median outgrowth it can be of little use. From this it follows: (1) that much more accurate diagnosis of the particular kind of enlargement is required before the unilateral operation can be condemned—unfortunately, in the cases that have been published, successful and unsuccessful alike, only the vaguest details have been given; and (2) that experiments with the view of determining this point, performed upon animals, in which the fusion is less complete than it is in man, are of no use, for the conditions are not the same.

Wimpole-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF "PHONIC SPASM" SUCCESSFULLY TREATED BY ELECTRICITY.

BY RONALD A. D. DANIEL, M.B. DURH.,
LATE ASSISTANT PHYSICIAN TO THE INFIRMARY FOR DISEASES OF THE CHEST AND THROAT, MARGARET-STREET, CAVENDISH-SQUARE, W.

THE above condition being of somewhat rare occurrence, and the treatment most often unsatisfactory, a few notes of a case which has come under my care may be of some interest. The patient was twenty-eight years of age and had suffered from the complaint in question for over a year. It had come on gradually and was at first only apparent when he spoke publicly under exciting or nervous conditions. From this, however, it became more and more common, till at last any duties involving public speaking became most difficult. In ordinary conversation it was only occasionally noticeable, while singing could be performed without inconvenience. The patient described the effort to speak as being most distressing, as, though articulation proceeded, he was unable to produce any sound for an interval varying from one to two minutes. A careful examination with the laryngoscope revealed no abnormality of any kind, and his general condition was all that could be desired. He had been under medical treatment and tried various remedies, without, however, any, or but a little temporary, improvement. Under such circumstances I decided to call in the aid of electricity, and to this end used the constant current for from fifteen to twenty minutes every day for a fortnight, after which time, as progress was favourable, I reduced it to three times weekly. I employed sponge electrodes of such a size and shape as could conveniently be placed on either side of the larynx, and also varied the treatment on each occasion by directing the current antero-posteriorly, placing the anodal electrode over the larynx and the kathodal one on the back of the neck. The strength of the current used varied from two to three milliampères, and the case was treated for nearly six weeks, improvement becoming more and more apparent. It ended happily in the disappearance of the patient's malady, of which two months afterwards there had been no return.

Remarks.—This condition has been mentioned by Prosser James as "stammering of the vocal cords," a term which I think very aptly describes its distinctive features, for one must at once notice the striking analogy existing between it and an ordinary case of "nervous" stammering. In both there is the increased tendency when excitement or emotion comes into play, or where the subject attempts the process of public speaking, whereas in such efforts as singing a similarity exists in the disappearance of the trouble. Again, in the case mentioned above the patient was always for the time relieved by taking alcohol, but seemed worse after much smoking, mental worry, or marital intercourse, a condition of things which I have invariably found to apply in the case of stammerers. Furthermore, both disturbances would have a common effect in making the sufferer intolerant of society and unfit him for certain forms of occupation. With regard to electricity as a remedial agent, I have noticed some correspondence in THE LANCET as to the relative efficacy of different modes of application. It seems to me, however, that it is impossible to lay down any hard-and-fast rule in its employment, for where such points as sex, age, and susceptibility so powerfully obtain cases are best treated on their respective merits. In neuralgic and other appropriate conditions I frequently obtain the best of results from the constant current applied as indicated above, the only drawback, of course, being the tendency to irritation of the skin. This, however, varies very much in different individuals and must be obviated by changing the position of the electrodes or reducing the current. In order to obtain beneficial results the main point is, I should say, for the practitioner to apply the agent himself or see that it is done by a competent

person, and not relegated, as is too often the case, to the fanciful manipulation of the patient.

St. Charles-square, W.

NOTES ON TWO CASES OF TETANUS; RECOVERY.

By EDGAR SWINDELLS, L.R.C.P. LOND., M.R.C.S. ENG.

RECOVERY from tetanus is so extremely rare—the mortality being, I believe, about 90 per cent.—that I have thought it worth while to record the two following cases. Both demonstrate the value of chloral hydrate in this condition.

CASE 1.—The patient was a lad sixteen years of age. Three months before the date of the attack, whilst engaged in his duty—viz., that of attending to horses—he received an injury from a horse treading on the left foot. No notice was taken of it beyond the administration of domestic remedies. Ever since the accident the patient's mother noticed that he seemed to have difficulty in swallowing. He also complained of a "stiff neck." On the evening of Wednesday, June 12th, 1895, I received an urgent summons to see the patient. I found him lying in bed with strong tetanic contractions affecting all the muscles of the body. There were marked opisthotonos and risus sardonicus. The muscles of the neck were firmly contracted and felt as hard as iron (the patient was a powerfully-built young fellow). The masseters were also firmly contracted. The jaws were completely and firmly closed, and the tongue could not be protruded. The bowels were confined. The patient complained of pain and stiffness of the neck and down the spine. On making a thorough examination to ascertain the cause I found an ecchymosis under the nail of the left big toe. There was no other mark of injury all over the body. I at once ordered the patient to be kept perfectly quiet, the room to be darkened, and liquid nourishment to be given at frequently repeated intervals. I prescribed ten grains of chloral hydrate every two hours. On the 13th I found the patient sitting up in bed. He stated that he could not lie down voluntarily; when he tried to do so he fell back. He said he felt better. There had been no more convulsions of the muscles of the back. There were still the risus sardonicus, trismus, and pain and stiffness of the neck. The head was kept bent forward, the eyes looking straight in front; he was unable to turn his head to either side. On the 14th there had been a return of the tetanic contractions of the muscles of the back since the day preceding. On the 15th the patient said he felt better. There had been no return of the opisthotonos. On July 7th the risus sardonicus had quite disappeared, as also the trismus, though there were still considerable pain and stiffness of the neck. The patient was allowed to sit up a little time. On the 17th the pain and stiffness of the neck had quite disappeared. The patient is now walking about feeling as well as ever.

CASE 2.—About three years ago I attended a little girl aged ten years who was suffering from well-marked tetanic symptoms. The condition in this case was idiopathic in origin. There was no history of injury, and no sign of wound or bruise of any kind. I gave her five grains of chloral hydrate every two hours. On the fourteenth day, as the tetanic symptoms had all disappeared, I stopped the chloral, when the symptoms immediately returned with increased severity. On renewed and continued exhibition of the drug they all disappeared again, and the patient completely recovered in six weeks from the date of the first appearance of the symptoms.

Besides these two successful cases I have also had a fatal one. The patient was a young man aged twenty-two years in whom the symptoms supervened upon an injury to the leg received at football.

Barking, Essex.

ORMSKIRK COTTAGE HOSPITAL.—The newly erected Cottage Hospital at Ormskirk was formally opened by the Countess of Derby on Jan. 22nd. It stands on a piece of land between two and three acres in extent, presented by the Earl of Derby, and consists of three pavilions connected by a corridor 55 ft. long. The central block contains an operating room, bathroom, and a ward for two beds, while at either end of the corridor there is a ward for three beds. The treasurer said that the hospital, including all the internal fittings and arrangements, cost between £1100 and £1150.

A Mirror OF HOSPITAL PRACTICE BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

WESTMINSTER HOSPITAL.

CASE OF ADDISON'S DISEASE TREATED UNSUCCESSFULLY WITH SUPRARENAL CAPSULES.

(Under the care of Dr. W. MURRELL.)

THE treatment of Addison's disease by the administration of the suprarenal capsules of some animal, such as the sheep, has not been extensively tried as yet, but the results obtained so far are not at all encouraging. This case was mentioned as an example of unsuccessful treatment by Dr. Parkinson at a recent meeting of the Clinical Society during a discussion on a paper by Dr. Ringer and Dr. Phear. Dr. Ringer gave a summary of recorded cases where similar treatment had been tried; out of nine, five patients had shown improvement, but it could not be said that a sufficient time had elapsed to determine whether the benefit was permanent or not. In two cases no improvement was noted, in one a limited trial of the treatment was given, and in another death followed. Dr. Turney, at the same meeting, referred to another case in which this treatment received a fair trial, but without definite result. Cases of Addison's disease often improve although no treatment is given, so that it is difficult to say that any temporary improvement when the capsules are given is in reality due to them. In this case a most careful trial of the method was carried out, and it is probable that improvement would have resulted had there been any specific action in the capsules which were administered.

A man aged thirty-one years was admitted into Bouverie Ward, Westminster Hospital, on Nov. 15th, 1895, suffering from Addison's disease. Two of the patient's uncles on the mother's side died from phthisis, but apart from this there was no history of that disease. He had always been well fed and had never been much exposed to cold or wet. He fell from a ladder a distance of about fifteen feet, in October, 1894, but was not hurt and experienced no inconvenience from it. He had never been laid up and always led a comfortable and fairly easy life. About the beginning of August he noticed that his skin was beginning to grow yellow, but for some weeks before this he had been feeling unwell and had been depressed in spirits. A week later he had a severe attack of vomiting, which lasted for a couple of days and was followed soon after by another attack of shorter duration. On admission to hospital he was found to be very weak and was distinctly emaciated. He weighed 8 st. 13 lb. and stated that before his illness he had weighed 11 st. He was curiously apathetic and showed but little disposition either for conversation or exertion. The whole body presented an olive or greenish-brown colour, the pigmentation being very marked on the face, hands, abdomen, and in the regions of the axillæ and scrotum. There were two well-marked patches on the mucous membrane of the mouth, one on either side. His appetite was fair, but not so good, he said, as it was formerly. There was no cough, and an examination of the chest showed nothing abnormal with the exception of a little increased resonance over the front of both lungs. The bowels were regular and there was no albumin or sugar in the urine. He was kept under observation and without active treatment for ten days. During that time he had only one attack of vomiting. He lost 4 lb. in weight, and in the evening his temperature varied from 99·6° to 100° F. On the 26th he was ordered tabloids of extract of suprarenal capsule, one three times a day, each tabloid representing five grains of the fresh extract. This treatment was continued for three weeks, and during that time he took sixty tabloids. He suffered a great deal from nausea, and had three bad attacks of vomiting. He lost 3 lb. in weight, and there was a distinct increase in the amount of pigmentation. It was thought that possibly the dose might be insufficient, and four tabloids three times a day were ordered, but they so

distinctly increased the patient's discomfort that treatment in this form was reluctantly abandoned. On Dec. 17th arrangements were made for giving the patient the fresh suprarenal capsules of sheep. Mr. Copeland, the house physician, obtained the coöperation of a friendly butcher, who placed at his disposal as many animals as were required. The sheep were slaughtered in Mr. Copeland's presence, and the adrenals were immediately removed by him and brought absolutely fresh to the hospital. The initial dose was a drachm, finely minced and administered on bread and butter, a little pepper and salt being added to improve the flavour. The first dose was given on the 18th at 10 A.M., and the patient almost immediately complained of nausea and vomited slightly. This was followed an hour later by a severe attack of vomiting. The pulse had been weak throughout, and no rise of arterial tension was noted. At 4 P.M. a second dose of a drachm was given, and this, too, was followed by vomiting. On the 19th at 4.30 P.M.—that is, after an interval of twenty-four hours—a dose of half a drachm was given, a little brown sugar being substituted for the pepper and salt for flavouring purposes. This was followed in forty-five minutes by a severe attack of vomiting, and the patient complained of nausea, which persisted the greater part of the night. On the 20th the dose was reduced to fifteen grains, and this was given three times a day until Jan. 1st, 1896. As it was thought that possibly there might be some difference in action in the adrenals of different animals a calf was sometimes substituted for the sheep, but with no better result. The patient had several severe attacks of vomiting, rapidly lost weight and strength, and became much more listless. The pigmentation deepened in colour, and as the patient's condition was extremely critical no further attempt was made to push the treatment. He gradually sank and died on Jan. 6th, after having been fifty-three days in the hospital.

Necropsy.—At the post-mortem examination (which was made by Dr. Hebb) it was found that the adrenals were much enlarged and were represented by fibro-caseous masses. The right weighed rather more than ¾ oz. and the left a little under 1 oz. Cover-glass preparations from the juice of the capsules showed a small number of micro-organisms giving the specific colour reaction of tubercle bacilli, and although some had the characteristic shape and appearance, most of them were shorter and thicker than usual. There were some ovoid skein-like collections. The left semilunar ganglion was swollen and twice the size of the right. It was grey in colour and shining. The lungs presented a few caseous masses; the pancreas was atrophied and the kidneys were normal. Nothing was detected in the brain.

TORBAY HOSPITAL, TORQUAY.

NOTES ON THE RADICAL CURE OF VARICOCELE.

(Under the care of Mr. A. E. WATSON.)

FOR the notes of the cases we are indebted to Mr. A. E. Watson, under whose care they were; he states that he was under an obligation to Mr. Thos. Finch, jun., senior surgeon to the hospital, for permission to operate on and record them.

In the following twenty-one cases of radical cure of varicocele the patients were healthy, well-developed youths of an average age of sixteen and a half years, and were operated upon to enable them to join the army or navy, having previously been refused because they were subject to varicocele. The varicocele was in every case on the left side, but in Case 13 (see Table) there was also a small varicocele on the right side, which was likewise operated upon. The detail of the operation is the same in all cases, with slight modifications. The patient is given an aperient the night before the operation, and on the morning of the operation the pubes and scrotum are carefully shaved, and the skin is well washed with soap and water, and afterwards with carbolic lotion (1 in 80) or perchloride of mercury lotion (1 in 2000). The patient is anæsthetised with chloroform, and before operating the parts are again washed with the above lotions. An incision varying from an inch to an inch and a half is made through the skin of the scrotum, about half an inch from the external abdominal ring, this incision is usually made by transfixing a transverse fold of the scrotum and cutting through it. The cord is then drawn out of the wound and the fascia carefully divided until the enlarged veins can be seen through it, the general sheath immediately surrounding the veins not being opened. The cord is then grasped between the index-finger and thumb of the left hand; the vas deferens is felt for and carefully kept out of the way. A long curved needle, threaded with stout carbolised catgut, is now passed (at the lower angle of the wound) between the bundle of veins and the vas deferens, and another ligature is passed in the same manner at the upper angle of the wound. Before tying these ligatures the position of the vas deferens is noticed. The lower ligature is then tied firmly, and then the upper, and the portion of ligatured veins between the two ligatures is cut out with a pair of scissors, so as to leave a short, free portion beyond the ligatures. In the first fifteen cases the cut ends of the veins were left and not sutured together; in the last six the divided ends of the veins were brought together with a ligature, following the plan first advocated by Mr. W. H. Bennett. In Cases 15 and 21 this was done by passing a small ligature through the centre of the divided ends of the stump, which were then brought into accurate apposition. In the other four cases a fresh ligature was not passed through the divided end of each stump, but the original ligatures used to tie the veins were not divided, but left rather long, so that the ends of the upper ligature could be tied to the ends of the lower and the divided ends of the veins be thus brought together. This method does not at first sight seem to be so careful or accurate as the first method of suturing the ends together, but it was found that with care the two ends could be brought together and the results were good, the cord uniting just as readily in these cases as in the others. After ligaturing the ends of the veins the wound is carefully examined, and all bleeding points are carefully secured. In one case, although there was no bleeding before suturing the scrotum, free hæmorrhage from the wound suddenly occurred as the dressings were being applied. The wound was reopened, and the hæmorrhage was found to proceed from a vein which had not been included in the ligatures; this was ligatured and divided, and the patient made a good recovery. After dusting iodoform over the wound a dressing of mercurial wool, white wool, and gauze is applied. The dressing is cut in the form of a square, and one angle of the square cut out; this is fastened round the penis by means of a safety-pin, a T-bandage is applied, and the scrotum is well supported. A small triangular pad is put between the patient's thighs on his getting back to bed, and this helps to support the scrotum. The patients are kept in bed for three weeks from the time of operation, and after that time, if all goes well, are allowed to get up, but are told to wear a suspensory bandage for two or three months. No drainage-tube is used for the wound. The first dressing is usually performed three days after the operation, and if everything is going on well the second dressing is made in another five or six days. In most cases there was œdema of the scrotum for a week or fortnight after the operation; but this was not troublesome and soon passed off. The testicle on the side of operation was generally somewhat enlarged and tender for about the first week, but this soon subsided. In only one case did any trouble occur—viz., in Case 15. The temperature rose to 101·8° F. eight days after the operation, and there was slight suppuration of the wound. The testicle became enlarged, painful, and very tender. This delayed convalescence somewhat, and the patient left the hospital with some enlargement of the testicle, but with no pain or tenderness; he was subsequently refused admission into the navy on this account. In Cases 12 and 13 the tunica vaginalis was opened by accident; the opening was ligatured in Case 12, but not in Case 13. Both cases did well. In all cases Mr. W. H. Bennett's plan was adopted. The general sheath surrounding the veins was not opened, and all the affected veins were included in the ligature. By this means all the affected veins are ligatured, as none of them ever lie outside the fascia. This is contrary to Mr. W. H. A. Jacobson's advice. He states[1] "that, although in practised hands the results may be good, he does not think it advisable to recommend this method," and mentions one case at least where, having operated upon a large varicocele, and although leaving an apparently large number of veins behind, the wound opened and a gangrenous testicle appeared in it. When Mr. Watson first commenced the operation he had not seen any record of Mr. Bennett's or Mr. Jacobson's cases, and the plan he then adopted of tying all the veins without opening the fascia covering them was followed all through with no bad result. In some recorded

[1] Diseases of Male Organs of Generation.

cases of varicocele the testicle on the operated side is stated to have been wasted; this was noticed in Case 21, where the varicocele was a large one, but the left testicle was only slightly wasted. None of the patients complained of neuralgic pains &c.; in fact, few of them knew there was anything wrong before being told by the medical officer examining them for admission into the navy. The shortening of the cord, by bringing into apposition the two ends of the stumps, must be of great use, but this was unfortunately not performed in the first operations. In the last case operated upon, Mr. C. B. Lockwood's plan of keeping the dressing in position by applying a triangular piece of jaconette over the dressing, with two strips of bandage sewn to the apex and one strip of bandage at each of the other angles, as well as an aperture near the base of the jaconette for the penis to pass through, was adopted. The bands from the apex pass round the thighs and are fastened to the other bands which pass round the pelvis. An engraving (from a photograph) of this outside dressing is to be found in THE LANCET of Oct. 19th, 1895, illustrating Mr. Lockwood's method of dressing such cases. It was found more useful than the ordinary T-bandage mode of dressing used in the other cases and is no doubt more comfortable to the patient and need not be removed when his bowels are opened. The ligature and excision of a short length of the veins seems to be the only reliable method to prevent recurrence, and the slipping or absorption of a ligature may easily lead to renewed varicocele if the veins have not been divided. The disadvantage of the subcutaneous method is at once shown, and if proper antiseptic precautions are taken and the wound is kept sweet antiseptic excision seems to be a safe and reliable method of cure.

List of Operations for Radical Cure of the Varicocele.

No. of case.	Age.	Number of days in hospital.	Side.
1	16	22	Left
2	19	21	"
3	16	23	"
4	17	31	"
5	15	29	"
	15	27	"
7	15	24	"
8	15	34	"
9	15	26	"
10	17	23	"
11	20	35	"
12	16	25	"
13	16	21	Left and right.
14	16	22	Left.
15	22	55	"
16	15	25	"
17	15	24	"
18	15	23	"
19	17	24	"
20	16	51	"
21	19	30	"

REMARKS.—In Case 12 the tunica vaginalis was opened by accident; the opening was ligatured with catgut. In Case 13 there was also a small varicocele on the right side; the tunica vaginalis was opened on the right side; no ligature was passed round opening; the case did well. Case 14 was a small varicocele. Case 15 had slight suppuration of the wound; convalescence was retarded by this and by an attack of epididymitis; the temperature went up to 101° F. eight days after the operation, and the testicle was noticed to be swollen and tender; no cause could be found for this; the patient eventually left the hospital with slight swelling of the testicle, but no pain or tenderness. In Case 16 the veins were tied and divided, and the cut ends sutured together. In Case 17 the cut ends of the veins were tied together with the original ligature with which the veins were tied, so that no suture was passed through the divided portions on the free side of the ligature; this was also done in Cases 18 19, and 20. Case 18 was operated upon on Sept. 4th; the temperature the next night was 100°; the testicle was enlarged, painful, and tender; the temperature gradually fell and was normal on Nov. 9th. In Case 19 there was some hæmorrhage after the wound had been stitched, necessitating reopening and retying the veins in two different places; it was found that the veins had not been properly tied; this was rather a large varicocele. Case 20 was delayed in hospital. First, operation was not performed for some days after admission, and, secondly, there was troublesome suppuration about the stitches; the catgut ligature had to be removed. Case 21 presented a large varicocele about the size of a hen's egg; there was very slight diminution in size of the left testicle as compared to the right; there was slight suppuration about the stitches.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Non-Traumatic Ecchymoses.—The Exceptions to Colles' Law.

AN ordinary meeting of this society took place on Jan. 28th, Mr. HUTCHINSON, President, being in the chair.

Dr. H. A. LEDIARD (Carlisle) read a paper on Ecchymoses from Natural Causes, of which the following is an abstract. The subject embraced those modes of death called "asphyxial"—i.e., where one or other of the causes of interrupted respiration had caused death. Attention was also directed to various other conditions which in the living were also associated with ecchymosis upon or within nearly all the tissues of the body. It was contended that, although most writers alluded to the subject more or less briefly, the occurrence of such ecchymosis had not received the attention it merited, seeing that judicial error might arise from a misinterpretation of the appearances. Particular stress was laid upon ecchymosis of the mucous membrane of the genital organs in the female and its occurrence from natural causes, seeing that such ecchymosis might be mistaken for criminal violence. The conclusions submitted were: That it would be a circumstance calling for particular comment if the mucous membrane of the vagina could be shown to be free from extravasations of blood or punctiform ecchymosis in asphyxial conditions and asphyxial modes of death; that it was in the highest degree improbable that the vaginal mucous membrane did not share with the other tissues and organs of the body the same liability to ecchymosis; and that from its position in the body, delicacy of structure, and vascularity, the mucous membrane of the vagina and vulva would be the more likely to exhibit punctiform ecchymosis in the above-mentioned conditions.—The PRESIDENT complimented Dr. Lediard on his useful summary of opinions, which would prove of help to many engaged in practical medico-legal work. Those officially connected with asylums could probably furnish much information upon this head, for ecchymoses were common in the insane, and many suspicions of violence on the part of asylum attendants, based on the assumption that the ecchymoses were necessarily traumatic, had been no doubt unjustly entertained. He had a drawing of an elderly man who had contracted whooping-cough from his grandchild, and whose face became covered with large ecchymoses. These lesions were common in ophthalmic practice, and it was wise to remember the importance of diathetic conditions as predisposing causes, such as gout and advancing life.—Dr. LUFF said that medical jurists were indebted to Dr. Lediard for drawing attention to this subject, but he differed from him in some of the statements made in the paper. As a jurist he attached little diagnostic importance to sub-pleural ecchymoses *per se*. Tardieu thought that these were due to suffocation, but since then it had been shown that they might be due to many other causes. They occurred especially in connexion with death from poisons, such as the benzine derivatives, or from burns, or in the hæmorrhagic diathesis. He did not think that punctiform ecchymoses would be accepted by medical jurists as an indication of rape, for little short of laceration of the vulva or vagina, with the presence of spermatozoa, would be accepted as satisfactory evidence. As to the cause of ecchymoses of the skin apart from violence he had given a list of them in his work on forensic medicine.—Dr. LEDIARD, in reply, pleaded guilty to omitting to consult Dr. Luff's book. He held that vaginal or vulval punctiform ecchymosis might certainly suggest rape, and so lead to the building up of an opinion which might turn out to be erroneous.

Dr. GEORGE OGILVIE read a paper on the Exceptions to Colles' Law. He said that the number of cases published as exceptions to Colles' law was about twenty. They differed in conclusiveness. He laid down the conditions which had to be fulfilled in order to establish an undoubted case of this kind. Such cases existed. Two of them were selected and given—one because it was imperfectly known and the other because it had been overlooked altogether. Cases of this kind must be rare, even if the fact which they taught was not of exceptional occurrence. Other recognised facts in the teaching of syphilis did not rest on better evidence.

The infection of a nurse, whether the mother or not, by a congenitally syphilitic child seemed to be rare altogether. On this point great diversity of opinion existed. The question could only be settled by a collective investigation extending over lying-in hospitals, children's and foundling hospitals, not by the experience of syphilographers. The practical and theoretical consequences of Colles' law were discussed. They broke down since the exceptions were established. The pendant to Colles' law, which was known abroad by the name of the law of Profeta, stood on an even weaker foundation. Healthy children born of syphilitic mothers were not necessarily immune against the mother's disease. The fact that the infectious disease of the mother did not imply infection of the child or immunity of the healthy child—although the disease appeared in the mother at the time of gestation, neither too early nor too late for transmission—was in accordance with our experience in diseases. If the immunity was extended beyond the child's or the mother's disease to the disease in general, the fallacy of the two so-called laws was further shown by those cases in which the mother of a congenitally syphilitic child contracts fresh syphilis shortly before or after delivery. Dr. Ogilvie concluded by laying before the society some questions which might be the basis of a collective investigation.—The PRESIDENT said that the profession were glad to hear those who boldly criticised and investigated accepted opinions. He, however, differed from Dr. Ogilvie in the sense in which the term "law" was to be accepted. We used the word "law" in medicine as the expression of a manifestation of force in any given direction, and it was sufficient if the observer proved that the force, if not interrupted, would proceed in the given direction. What he understood by Colles' law was this, that an infant, conceived by a mother and procreated by a syphilitic father, would exert such an influence on the mother as to render her susceptible of syphilis in a degree different from the normal—it conferred upon her an acquired immunity. Again, he thought that Dr. Ogilvie strained the meaning of the word "immune." Immunity was not absolute as applied in medicine, and this was as true of small-pox as of syphilis. The immunity from various causes might be undermined and destroyed; it was a *relative* and not an *absolute* property. One attack of syphilis did not absolutely protect against a second, and patients sometimes had second attacks shortly after the first. He had seen a second attack occur within one year, but this did not disturb his belief in the truth of the law that one attack of syphilis protected against a second. His belief that the mother received something from the fœtus which rendered her different in her behaviour on exposure to the poison of syphilis was confirmed by the rarity of the exceptions; for, if Colles' law were not true, infection of the mother ought to be much more common. He had known of a fair number of cases of chancre on the nipples of those who, not being the actual mothers, had suckled syphilitic children; but he had not met with a single case in which a mother had become infected by nursing her syphilitic child. Individual experience of this negative kind was valuable, especially when it was borne out by clinicians like Fournier and others on the continent. The exposure of mothers to infection by their syphilitic children must be enormously common, and for this reason, if Colles' law were not true many cases of syphilis ought to be forthcoming from among the mothers. The question was whether our practice should be altered in view of the exceptions which undoubtedly occurred, for all writers on the subject had admitted the existence of exceptions, and these he would, on investigation, regard as second attacks of primary syphilis. He submitted that there was nothing new to induce us to alter our instructions to patients, but, on the contrary, we could assure them that for all practical purposes they were safe. From the child's point of view it was a pity to deny to them the additional chance of life that was given them by maternal nursing.—Dr. SAVILL said that Dr. Ogilvie had referred to the parallel to be drawn between small-pox and syphilis. It had appeared to him that the contraction of small-pox by the mother during gestation did confer some kind of immunity on the fœtus afterwards, and he referred to four instances to illustrate this. A girl developed small-pox on Feb. 5th, she was confined on the 6th, and the child was vaccinated on the 7th. The child when vaccinated at first did not take, but later vaccination was successful. A woman developed small pox in the fifth month of gestation. She was confined at term. The child was vaccinated at four different times, but proved refractory. A woman contracted small-pox at the sixth month of pregnancy. Twins were born at term; they were vaccinated three times, and each was unsuccessful. A woman contracted small-pox at the seventh month of pregnancy. The child was vaccinated on two occasions with negative result, but the third time it took slightly. This child was born in an overcrowded small-pox hospital, but, nevertheless, failed to contract the disease. These instances went, so far as analogy was concerned, to support the converse of Colles' law. Dr. Ogilvie had established the occurrence of exceptional instances, and a few such instances sufficed to invalidate the application of the law in every-day practice. *Primâ facie* grounds had certainly been established for making an investigation into the subject.—Mr. COTTERELL argued against both the leading cases relied on by Dr. Ogilvie being accepted as indubitable infractions of Colles' law. In one the father had been free eleven years from syphilis, and yet was supposed to have given syphilis to his unborn child. In the other case there was evidence that the child had pemphigus which was said to be syphilitic; but syphilitic pemphigus rarely developed later than the first week after birth. Pemphigus, again, usually meant severe poisoning by syphilis, and yet the lesions in the child cleared up in ten days although the mother only was treated. He held that in these two cases there was no reliable evidence that the mothers were infected by their children.—Dr. LEES said that he had never yet seen a contradiction to Colles' law. Once he had seen a child (suffering from what was at the time believed to be inherited syphilis) give syphilis to the mother's breast, and the baby gave a chancre also to a sister who kissed it. He came later to the conclusion that the child was suffering from primary acquired syphilis, and in this conclusion Mr. Hutchinson had concurred. The exceptions to the law, he thought, were to be explained by a rapid failure of immunity, and he thought that it would be a great mistake to alter the rule at present adopted because of the importance to the child of the mother's milk.—Dr. COLCOTT FOX said that he had never come across an exception to Colles' law. In one case in which the father was syphilitic but the mother had never had a symptom twelve children were afterwards born and all of them had signs of syphilis. Pemphigus might certainly occur at any time during the first few weeks. It was an important point that the mouth was very rarely involved in congenital syphilis, and this probably explained why the mother's breast was so rarely affected. A large number of women who presented evidences of tertiary syphilis in the legs gave no previous history or signs of syphilis, and this, he thought, showed that their syphilis had been mitigated by its reception through the placenta.—Dr. COUTTS said that he had inquired at the Shadwell Children's Hospital among his colleagues for evidence of infection by cases of congenital syphilis. Only three supposed instances of exception to Colles' law had been met with besides the doubtful case published by himself in THE LANCET two years ago.[1]—Mr. PARKER quoted passages from Colles' book to prove that the author himself regarded the law as one without exception. Among the poor met with at the East London Hospital for Children were a large number of mothers who suckled syphilitic children who were not their own, and yet he had never known a case in which such mothers or other children had become infected through a congenitally syphilitic child. He agreed with Dr. Fox that a congenitally syphilitic child's mouth was not usually affected.—Dr. OGILVIE, in reply, expressed his sorrow that he had not quite convinced the President of the truth of his views. The exceptions to Colles' law were by no means of recent date, for a little work published in 1557 contained an account of a child who first infected the wet-nurse and afterwards the mother. Only three copies of this book were, so far as he knew, extant, and he had pleasure in presenting one to the library of the society. In 1877 a surgeon had stated that not only had Colles' law no exceptions but that it was capable of a wider application, for mothers were immune not only against the congenital syphilis, but also against the acquired syphilis of their own children. He did not deny that immunity existed within certain limits, but it was by the exceptions that they should deal with this question, just as they did with the risk of vaccino-syphilis. The ideal aim was to exterminate the possibility of exceptions, and each single observation in this direction should be weighed and not counted.

[1] THE LANCET, June 9th, 1894.

MEDICAL SOCIETY OF LONDON.

Some Difficulties of Diagnosis in Hepatic Disease.—Additional Cases of Hepatic Surgery.

AN ordinary meeting of this society was held on Jan. 27th, the President, Sir JAMES CRICHTON BROWNE, being in the chair.

Dr. LAUDER BRUNTON read a paper on Some Difficulties of Diagnosis in Hepatic Disease. He related the histories of the cases to illustrate his subject, as he held that a selection of cases would be more useful than the enunciation of general rules. Case 1, illustrating the occasional impossibility of an exact diagnosis, was that of a man aged forty-five years suffering from obstruction of the gall-duct and intense jaundice. The gall-bladder was opened, but three days afterwards the patient sank. On post-mortem examination the liver appeared to be normal to the eye and hand, but a small, round, hard mass about the size of a French bean could be felt in the gall-duct by pressing the finger upon it. It could also be felt by a probe passed into the duct from the duodenum and from the gall-bladder. But even with such manipulation it was impossible to say whether this lump was a gall-stone. On making a section through the liver the obstruction was found to be the small end of a mass of malignant disease nearly of the size and shape of a jargonelle pear. The only point here that might serve in diagnosis was great loss of energy by the patient. Case 2, in a man aged forty-five years, was one of small, hard liver with dyspepsia; the diagnosis of cirrhosis was made. The enlargement which afterwards occurred was at first thought to be congestion due to a chill. In three months the patient died of enormous malignant enlargement. The diagnostic points in the case were persistent eructation of sulphuretted hydrogen, foul-smelling stools, and the fact that the patient, though a free liver, always drank, not spirits, but wine, and that of the best quality. Cases 3 and 4 were instances of great hepatic enlargement in men aged forty-five and sixty years respectively. The probability of malignant disease was great, but under iodide of potassium both livers diminished. That of the younger man (Case 3) became normal, and that of the elder (Case 4) presented hard nodules, which on palpation greatly resembled cancer. That they were not was shown by their causing no symptoms. In Case 5 an elastic swelling was felt in the right iliac region of a woman. It was diagnosed as an enormously dilated gall-bladder, but on post-mortem examination was found to be a very long gall-bladder, with a correspondingly elongated right lobe of the liver. Case 6 was that of a man aged sixty years who had a chill nine months before and had been losing strength. Five months afterwards he had malarial fever. On examination a rounded swelling was felt in the epigastrium, reaching down to the umbilicus. It pulsated much in the epigastrium, but less below. It moved with respiration, and was diagnosed as abscess or gumma. A murmur was detected in it by another physician, who supposed it to be an aneurysm. Post mortem it was found to be a cerebriform malignant growth in the left lobe of the liver, the right being almost free, only a few small nodules of growth being present. Case 7 was that of a woman who had had jaundice and history of gall-stone a year before. A swelling extended from the ribs nearly to the umbilicus, and it could be pushed up behind the ribs. It was diagnosed as a floating kidney, and Mr. K. Thornton, who saw it, thought that it was not only floating, but affected with malignant disease and ought to be removed. It was found to be a gall-bladder with gall-stones. The diagnostic point was that it did not slip so easily up as a floating kidney would do, but required some pressure. In Case 8, that of a woman aged thirty-two years, there was pain below the ribs on the right side, shooting down towards the umbilicus, and pain in the right lumbar region. An oval mass was felt extending from the ribs to the umbilicus when the patient was recumbent, but it fell down to Poupart's ligament when she stood up, and slipped up under the ribs with pressure. When held down it did not seem to be drawn up by the liver during expiration. It was diagnosed as floating kidney. The patient died of peritonitis, and the kidneys were found healthy, the tumour being a gall-bladder with gall-stones. Ulceration had taken place opposite an impacted stone and had set up peritonitis. Case 9 presented a history of typhlitis. There had been no jaundice or symptoms of gall-stones. A tumour like a cricket ball was felt between the liver and the umbilicus. He was uncertain whether it was a cyst, encapsuled pus, or gall-bladder. On operation it was found to be a gall-bladder packed with large stones. The patient recovered. Case 10 was that of a man aged sixty years who had gall-stones six years previously. For the last three years he had constantly recurring attacks, relieved by lavage of the stomach. There was great loss of weight, with deep jaundice and emaciation. A projection which was felt was supposed to be a gall-bladder. Operation showed an empty gall-bladder and no stone, the supposed gall-bladder being omentum and pylorus adherent to the liver. The adhesions were broken down, and the patient recovered with a colour like that seen in Addison's disease, which disappeared on the administration of tincture of suprarenal capsule. Dr. Lauder Brunton concluded by saying that he hoped a study of these cases by others would enable them to avoid the mistakes into which he had fallen.

Mr. KNOWSLEY THORNTON then read a paper on Some Additional Cases of Hepatic Surgery. After a few introductory remarks with reference to suggestions made in previous communications to the society as to the importance of more accurate diagnosis, he gave notes of four cases of cholecystotomy, one case of choledochotomy, one case of hepatic abscess, and one of simple exploration. Case 1, which he related, was that of a woman past middle life whom he saw in 1893. She then had pain and swelling under the liver, which was thought to be either distended gall-bladder or malignant disease, probably the latter. She was emaciated; there was no record of hepatic colic, and a hard and tender lump could be felt. Later the swelling felt more like a distended gall-bladder and was cut down upon. Glairy mucus was evacuated and the cystic duct was found full of small sand-like calculi. The gall-bladder was stitched to the wound, which was drained, and the patient ultimately got well. Case 2 was a simple one of cholecystotomy and was now quite well. Case 3 Dr. Brunton had already referred to (*vide* Case 7, *supra*). He thought it was a renal case, for there was a line of clear percussion between the hepatic dulness and the renal tumour in most renal cases. This line of resonance was never present in gall-bladder cases unless the gut was adherent across the front of the gall-bladder. Case 4 was that of a woman sixty years of age who had good health until 1891, when she had a dry, brown tongue, with septic symptoms and jaundice. Fever was present, which lasted for three weeks, and jaundice lasted for two months. Afterwards she had several transient attacks of fever and jaundice, but the latter had become persistent in 1894 when he saw her. The case was diagnosed as one of impacted stone in the common duct, probably with deep-seated suppuration. On exploration the gall-bladder was found high up and the omentum adherent to it. A small angular stone was found in the hepatic duct and a larger stone was impacted in a dilated pouch of the common duct. He opened the common duct and took out a stone, closing it afterwards, although the closure was not perfect, for a flow of most offensive bile occurred from the drain-tube. The patient at first improved, but ultimately died with a recurrence of the rigors and fever on the eighteenth day. A limited necropsy failed to discover the cause of the high temperature. This case emphasised the wisdom of early operation in cases of impacted stone. Case 5 was that of a woman who, in July, 1892, became gradually jaundiced, the urine being deeply bile-stained and the stools of a fawn-colour. There was a large hard liver with a distended gall-bladder. Seven ounces of jelly-like fluid were extracted from the gall-bladder by aspiration, and much dark inspissated bile afterwards scooped out. The duct felt hard and like whipcord, but nothing was found in it. A biliary fistula was still discharging, and no bile entered the intestine. Case 6 he saw with Dr. Douglas Powell. The patient was attacked in June, 1893, with sudden severe pain at the lower margin of the liver; later there were similar attacks, which became frequent and severe. The gall-bladder was found to be distended and was aspirated, and much bile withdrawn. The gall-bladder was then opened and a small pouch found in the cystic duct with a minute, strictured opening leading backwards into the gall-bladder and forwards towards the common duct. He freely dilated these strictures and stitched the gall-bladder to the wound. The patient recovered and had since done well. Mr. Thornton then briefly tabulated all the cases brought before the society in this and four previous communications, and compared the results obtained with those of series of cases of renal, uterine, ovarian, and mammary surgery, and pointed to the lessons to be learnt

from such comparative results, the chief one being the need of more perfect diagnosis, which would enable the surgeon to plan and think out beforehand the details of the operation, the result being fewer mistakes and omissions and a larger percentage of successful cases.

Mr. TREVES said that one could not help noticing three or four common facts running through these cases. Carcinoma was often found where some trouble of benign character was suspected, whereas the reverse was not often true—namely, that carcinoma was diagnosed, but the condition afterwards turned out to be of innocent nature. The loss of weight, loss of colour, and loss of strength so often associated with carcinoma were more common as associates with non-malignant liver cases than with cases of non-malignant disease of other organs. Even when the liver was exposed in the course of a laparotomy a diagnosis was sometimes not forthcoming, and he quoted a case to illustrate this. There were certain common text-book statements which were not correct—for instance, the fundus of an enlarged gall-bladder was not always rounded; it was sometimes pointed like a horn. Then, again, there might be bowel in front of the gall-bladder which was not adherent to it. Further, the gall-bladder in enlarging did not always travel along the orthodox text-book route, first downwards to the level of the umbilicus and then towards the left loin. Nor did the pain necessarily radiate upwards; it might be below the umbilicus or towards the other side. As to the bile itself, physiologists might regulate their statements as to its functions by reference to the experience of surgeons, for it did not necessarily keep the contents of the intestinal canal disinfected, or was it essential to digestion, or was its aperient action a requisite of the economy. Indeed, he thought that surgeons were beginning to take somewhat the view of the school board candidate in physiology, who, when asked to state what she knew of the source and functions of bile, said that it came from the stomach and was used for cleaning carpets. The escape of bile into the peritoneum was no longer regarded as a disaster, for normal bile had been shown to be sterile. Operations upon the liver were becoming the most common of abdominal sections. He had made a large incised wound into the liver without getting severe hæmorrhage, and it was an organ which would easily bear suture. He urged that there was no especial reason for removing an impacted stone from a duct, and if in the cystic duct and left to itself the stone would gradually work loose and come out of the wound or could be picked out of the open gall-bladder. In the pursuit of impacted stone all that the surgeon should do was to establish an opening leading down to it and then leave it alone. The iodoform gauze drain was the best, though it should not be kept in too long.

Dr. SANSOM quoted a case to show that occasionally a favourable result followed when carcinoma had been diagnosed. He referred to a point to aid in the diagnosis between cirrhosis and malignancy. Ordinarily the left lobe hepatic dulness and the cardiac dulness were coterminous, but in cirrhosis with shrinkage of the left hepatic lobe he had succeeded in demonstrating an area of resonance between the right border of cardiac dulness and the liver dulness.

Mr. SHEILD mentioned the case of a patient with obstructive jaundice, where the diagnosis lay between malignant disease and impacted stone. Exploration showed a distended gall-bladder and behind it cancer of the pancreas, and this was afterwards confirmed post mortem. There was much oozing of blood for a week after the operation. In a second case of obstructive jaundice in a man between thirty and forty years of age the diagnosis lay between syphilis and malignant disease, and after operation the nature of the case could not be clearly made out. Many dense inflammatory adhesions were torn through and lumps thought to be gummata were felt. The man was now emaciating, however, and appeared to be dying of malignant disease. In a third case a man was admitted with signs of intestinal perforation. The abdomen was opened and a ruptured hepatic hydatid found. The cyst was sewn to the abdominal wall. Later a second cyst suppurated and had to be opened, but the patient recovered.

Mr. TURNER referred to a case in which the gall-bladder was of the size and shape of a large banana, and coils of intestine, not adherent to it, lay over it. The cystic duct was dilated and some stones were removed from it, one being left in the duct. The patient got out of bed shortly after the operation and walked across the room; this induced fatal internal hæmorrhage, which at the necropsy was found to have proceeded from a small unnamed vessel. He had seen a second case perish from internal hæmorrhage from a very small vessel.

Dr. LAUDER BRUNTON, in reply, said that he could relate another case where the diagnosis was that of malignant disease, but post mortem hard masses of fibrous tissue were found in the liver; that case was still under pathological investigation.

Mr. THORNTON, in reply, said that it had never occurred to him to leave stones impacted in the ducts, and he thought that Mr. Treves had spoken too gravely of crushing or needling. A fine sewing needle passed through the duct wall would break up the stone sufficiently to allow it to pass, and if it were left impacted a fistula remained. The gauze packing was the greatest modern advance in abdominal surgery. The diagnosis between cancer and gumma on the operating table was a matter of great difficulty.

CLINICAL SOCIETY OF LONDON.

Excision of Temporo-maxillary Joints for Rheumatoid Arthritis.—Hystero-epilepsy with Dual Existence following Meningitis.—Myopathic Muscular Atrophy in an Adult.—Extensive Skin-grafting of Thigh and Leg.—Suppuration of the Left Shoulder-joint.—Traumatic Orbital Aneurysm.—Impaired Growth of Lower Epiphysis of Tibia consequent on a Sprain.—Pseudo-hypertrophic Paralysis in Three Brothers.

AN ordinary meeting of this society was held on Jan. 24th, Dr. BUZZARD, President, being in the chair. The meeting was devoted to the exhibition of clinical cases.

The PRESIDENT, before the regular work of the evening began, said it became them to perform a duty as loyal subjects of the Crown. He referred to the calamity that had overtaken the Royal Family, which was so recent and severe that there was no need to enlarge upon it. The members would feel keenly for those bereaved so suddenly and would desire to associate themselves with the members of the Royal Family in their grief. A vote of condolence was put from the chair and carried unanimously.

Mr. J. R. LUNN showed a case of Arthritis Deformans with Closure of the Jaw from Ankylosis of both Temporo-maxillary Articulations, which he had successfully treated by division of the necks of both condyles and removal of a wedged-shape piece of bone. The patient, a man aged forty-five years, was admitted into St. Marylebone Infirmary on July 17th, 1894. Twenty-five years ago he had rheumatic fever, and from that time most of his joints began to be affected, the knees being the first to become swollen. Two years later his jaw became stiff, and for the last twelve months he had been unable to separate his teeth at all or to take solid food. Both the patient's knees were swollen and distended with fluid; osteophytic outgrowths surrounded the joints, and most of the articulations in the body were affected with rheumatoid arthritis; his neck was stiff, and it could not be turned towards the right or the left. Both hip-joints were stiff, and the jaw could not be opened. The upper row of teeth overlapped the lower ones; the latter were loose. The patient stated he had lost flesh owing to the fact that he could not take solid or much liquid food without difficulty. He was very anxious for something to be done to enable him to open his mouth, as he felt he must die. On Aug. 18th the patient was put under chloroform, and great force was used to try to open his mouth, but without success. An incision two inches long was then made on the right side in a vertical direction a finger's breadth in front of the ear; after tying a few bleeding vessels bone was hit upon and was thought to be the neck of the condyle, but was the zygomatic process of the malar bone; the neck of the jaw was then divided, but there was no movement of the jaw after its division, so a wedge-shaped piece of bone was freely chiselled out and the wound was temporarily plugged. A similar process was gone through on the left side, with the exception that the incision on the latter was oblique instead of vertical; a considerable portion of the parotid gland was found overlaying the maxilla. The jaw was then forcibly opened by the screw-gag, so that the teeth were separated an inch; two teeth were accidentally forced out during the operation. Both wounds were closed and healed

by primary union. A wooden gag was put between the teeth and was tied in the mouth to keep the teeth apart; the whole operation lasted nearly two hours.

Dr. ALBERT WILSON (Leytonstone) showed a girl aged twelve years who, in April, 1894, had severe Influenza, followed by Meningitis and Mania. After six weeks the cephalalgia disappeared and muscular symptoms developed, twitchings, opisthotonos, with lividity and coma. She had many fits a day. In June, 1895, the old symptoms disappeared and a fresh train of phenomena appeared. When in an apparently normal state she would shake, turn a somersault, and enter a new and different mental state. Her memory for all events during health was quite gone, even to the forgetting of the names of things, including the parts of her body and her own name and identity and her parents; but she would remember in one such fit what happened in a previous one. Thus was established a complete dual existence. By education she learned the names of most things, but always employed baby pronunciation. She would write backwards, and that quickly. When these attacks developed she lost all power of walking or standing till about August, 1895. At the early stage she had fits of catalepsy, chiefly rigidity of the flexors. At times she had five or six fits a day, lasting a few minutes, and at her worst periods they lasted for days. She recovered from them quite suddenly, was never surprised at her surroundings, but very composed, and said she remembered nothing during the attack. The most striking feature was exhibited once when she had severe toothache during an attack. He gave chloroform and removed two teeth. On regaining consciousness she recognised that the teeth and pain were gone. Her father hypnotised her and brought her to the normal state, when she made the discovery of the blood and the loss of the teeth, but never remembered the previous pain or the administration of chloroform. She had then been in the abnormal state for about three days. There had been many variations, and she had four different existences besides the normal. (1) "Nib" for "old Nick," when she had violent passion and biting and slid down the bannisters: (2) "Dreadful wicked thing," when everything was reversed, black being white, asleep being awake, the head being the foot, and so on; (3) "Allie," when she was amiable and good; and (4) her ordinary fits, as already described. Other phenomena occasionally occurred. Thus she was at times completely deaf and dumb, or there might be loss of memory, so that she did not know those whom she ordinarily knew during the fits. The last three or four weeks a fresh phase had occurred. She was now (in January, 1896) living mentally in July, 1895, this having followed on a mental blank of a fortnight's duration. This was shown by her imagining events to have just happened which happened in July and other circumstances. Her general health and nutrition were good. She had not yet menstruated. The treatment had been by means of rest and quiet and fresh air. Tea and coffee caused attacks of mania. The thyroid treatment had no apparent effect.—Dr. ALTHAUS said that many cases of double consciousness after hystero-epilepsy were on record in which the patient would change into an entirely different personality.—Dr. ORMEROD inquired into the causation in the case shown, and asked whether it was really a meningitis or a febrile attack with nervous symptoms due to the same cause as the present condition, which, for want of a better name, he would be inclined to call hysteria.—Dr. ROBERT JONES said that he thought that the girl was unduly precocious and acted on suggestion.—Dr. WILSON, in reply, said that he was not attending the patient when the so-called attack of meningitis occurred. There was a rise of temperature after a chill, followed by headache and intolerance of light and sound, and after a time the fever subsided. He did not think that she was acting under suggestion at the present time.

Dr. NORMAN DALTON showed a man aged twenty-seven years who was the subject of Myopathic Muscular Atrophy which came on when he was twenty years of age. There was marked lordosis, which disappeared in the sitting posture, and the man was weak in the muscles of the front of the leg. When he rose from the floor he could not climb up his own legs like most children with muscular atrophy. The face was not affected. There was atrophy of the lower part of the pectoralis major and of the latissimus dorsi, the deltoids were weak and the biceps not so much so. The triceps on each side was very atrophied; the forearms and hands were strong. The glutei were not much atrophied, and the calf muscles were strong. He was unable to lift his toes. There was no reaction of degeneration and the knee-jerks had been lost quite early. There was no disturbance of sensation. The patient had married two years after the affection had commenced and had had two children. There was no family history of nervous affection.

Mr. H. PATERSON showed for Mr. WILLETT a man aged fifty-eight years who had been treated in St. Bartholomew's Hospital for Cellulitis of the Thigh and Leg. Although multiple incisions had been made, the skin and deeper tissues sloughed, and amputation was only desisted from on account of the man's extremely weak condition and the insufficiency of skin to form a flap. Under gas the sloughing skin was clipped entirely away and an enormous raw surface left to granulate. This was later covered by several large Thiersch grafts, the largest being 5 in. by 3½ in., the grafts being taken from the arm and forearm and opposite leg. The grafting had certainly lessened the patient's stay in the hospital and had improved the utility of the limb. The leg had remained soundly healed since 1893, when the grafting took place.—Mr. LUNN said he had grafted a very large number of ulcerated legs, the chronic ulcers being first curetted. Provided the patients could be kept in bed a sufficient time afterwards the newly-formed skin would not break down.—Mr. F. C. WALLIS asked how the skin grafts had been cut of such length.—Mr. WILLETT said that the integument had been well stretched by drawing the skin round behind the limb and then making sawing cuts along the tight anterior surface.—Mr. PEARCE GOULD remarked that there were many cases in which this method proved useful, although chronic ulcers of the leg would frequently break down if the patient were not kept recumbent for two months or more afterwards.

Mr. J. R. LUNN showed a case of Suppuration of the Left Shoulder-joint in a man suffering from Arthritis Deformans. The patient, aged sixty years, was admitted under his care on Nov. 27th, 1893, with chronic arthritis deformans and swelling of the left shoulder-joint. There was no history of gout or rheumatism in the family. The patient enjoyed good health until fifteen years ago, when he had his first attack of rheumatism. Since then he had had repeated attacks in most of his joints. On admission the man appeared to be ill; he was feverish, restless, and inclined to be delirious; he complained of intense pain in, and limitation of movement of, the left shoulder-joint, which was very large, tense, and very painful to touch. His temperature was 103·2° F. He was treated with rest, icebags, and salicylate of soda, but he did not improve. His temperature rose higher and he begged for something to be done. The joint was tapped by an exploring needle and pus was withdrawn. On Dec. 3rd an incision was made in front of the left shoulder-joint, commencing at the outer side of the coracoid process; pus was let out and the joint explored with the fingers and a counter opening made behind. The head of the humerus, which was rough and diseased, was curetted with Barker's gouge, the shoulder-joint being washed out with hot water. Iodoform emulsion was introduced and the incision closed in front, and a small drainage-tube was fastened in the posterior wound. This was removed the following day and the wounds healed very soon, the patient rapidly recovering. In June, 1894, the same shoulder again began to swell and his temperature rose to 102·4°, and the man seemed as bad as ever. The pus was again let out and the joint treated as before. Since the second operation the patient had enjoyed good health. He had now marked wasting of the left deltoid muscle and other muscles about the joint, the movements being very limited. He could only abduct his arm slightly and could raise it nearly to a right angle with his trunk, but had no power to keep it there.

Mr. RAYMOND JOHNSON showed a woman aged forty-four years who was the subject of a Traumatic Orbital Aneurysm. Four months before admission she fell on the pavement on the back of her head and remained unconscious for seven hours. After recovery of consciousness it was noticed that the eye was bloodshot and the eyelids were swollen. The next day the patient noticed a buzzing on the left side of the head extending from the eye to the ear, and within a week the eyeball became prominent. Six weeks ago the noise and the prominence became less. At the present time there was distinct prominence of the left globe; there was no congestion of the conjunctiva, and no pulsation of the globe could be seen or felt, but round the orbit and over the eyeball there could be heard a loud, continuous, humming murmur. The sixth nerve was paralysed, but there was no optic neuritis or dilatation of the veins of the fundus oculi. The vision was normal, except for diplopia since paralysis of the sixth

nerve had set in. He presumed that the condition was one of aneurysmal varix between the carotid artery and cavernous sinus, produced by a fissured fracture of the base of the skull. If this were so, it was difficult to account for the fact that no pulsation was seen or felt, and there was an absence of dilatation of the veins which one would expect with such a communication. No treatment was contemplated at present, but it was proposed to ligature the carotid if the symptoms increased. Compression of the carotid did not remove, though it diminished, the bruit and pulsation.—Mr. PEARCE GOULD asked, if the diagnosis were correct, how it was that there was no dilatation of the veins in the orbit or in the eyeball. Either the communication must be very minute or some other very special condition must be present. He agreed that it was wiser to do nothing until the symptoms were more urgent than at present. In many cases the symptoms had disappeared either spontaneously or with rest. A case was under the care of Mr. Lawson in Middlesex Hospital recently which presented all the symptoms of acute obstruction in the cavernous sinus, there being much engorgement of the veins with proptosis and bruit. The patient was kept at rest in bed and ice-bags were applied over the orbit and at the side of the head. The man left the hospital much better, and later it was ascertained that all the symptoms had disappeared.—Mr. W. G. SPENCER considered that probably some small branch of the carotid, such as the anterior communicating artery, had communicated with the cavernous sinus, and this had led to the modification of the symptoms.—Mr. BOWLBY said that sometimes after necropsy in these cases nothing had been found to account for the condition, and it appeared possible that these signs might be present without gross anatomical lesion. The paralysis of the sixth nerve in the case shown suggested, however, that there was some pressure upon it.

Mr. C. MANSELL MOULLIN showed a boy with an Uncommon Consequence of a Severe Sprain of the Foot. Five years previously the lad had caught his foot in a wheel and badly sprained it. After that he was in bed for some weeks without medical treatment. Since the accident the lower end of the tibia had failed to grow, while the growth of the fibula had proceeded at its normal rate; hence the external malleolus, by projecting downwards, had produced a spurious talipes. The internal malleolus was exceedingly small, but the lower end of the shaft of the tibia had also failed to grow. The boy was unable to walk for more than half a mile, when he was prevented by severe pain in the shin. He (Mr. Moullin) proposed to resect a portion of bone from the fibula, dividing the tibia at the same time if necessary, and thus to bring the foot into its normal plane position.

Dr. FLETCHER LITTLE showed three brothers affected with Pseudo-hypertrophic Paralysis. There was no family history of nervous disease. The eldest boy, aged thirteen years, had been affected for seven years; the second boy, aged ten years, had been affected for three years; while the youngest, aged five years, had only shown symptoms for nine months. The second child exhibited contracture of both lower limbs.

EPIDEMIOLOGICAL SOCIETY.

Experiences of Cholera in India.

A MEETING of this society was held on Jan. 17th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Surgeon-General C. A. GORDON, M.D., C.B., Q.H.P., read a paper on Experiences of Cholera in India, and the views held in regard thereto between the years 1842 and 1879. After describing the symptoms of cholera he observed that in those provinces in which epidemics occurred at irregular intervals they were usually, though not always, preceded by sporadic cases, whereas in the valley of the Ganges, where cholera was endemic, these cases occurred at all times of the year, often following errors in diet or the use of drastic purgatives. Epidemics appeared simultaneously in certain years at stations many hundreds of miles apart, and without any known inter-communication or common cause. They occurred at very irregular intervals, and there was no relation between local conditions and the virulence of the disease, stations being visited severely in one year that escaped lightly or entirely in another, their conditions having undergone no change meanwhile. In the same station one regiment might be attacked while others identically circumstanced were spared, or the disease might even be confined to single barrack rooms. Sometimes it was the men, at other times the women and children, who suffered most, and in succeeding outbreaks the incidence might be reversed. The majority of cases among men were, of course, between twenty and thirty years of age, but among children attacks rarely occurred under two years, though the mortality was heaviest in the third and fourth years of life. The mean rate of attacks among men was 17·40 and of deaths 7 per 1000, and 15·80 and 5 respectively among women. In 1867, however, the cases were 25·7 among the troops and 26·1 among the women and children, though more particulars were wanting; but on some occasions women had suffered so severely as to suggest a greater susceptibility in the female sex. Epidemics were often preceded by sporadic cases and by the prevalence of diarrhœa, but sometimes appeared quite suddenly in different parts of the country, occasionally ceasing as suddenly, even after a few days; or, after having apparently subsided, broke out again with renewed violence. They might be limited to small areas though free communication was maintained with other districts; or they might spread, as from a centre, far and wide; or again their progress would come to an abrupt termination at a place which, as previous or subsequent experience showed, enjoyed no natural immunity. Sometimes they seemed to follow the course of a great river and sometimes to march upwards against the stream; rivers might appear to oppose a barrier to their progress or the towns on either bank would suffer alike. In 1861 the great epidemic of that year followed the line of the Grand Trunk-road and its branches, but entirely passed over many villages in its course the conditions of which differed in no known respect from those attacked. River deltas in which cholera was endemic, and occasionally epidemic, differed among themselves in climate, geology, &c. Such were those of the Ganges and Brahmaputra, the Godavery, the Nerbudda, and Indus; yet of 152 officially recorded epidemics in the Madras Presidency 106 occurred in places adjoining rivers. There was a very general belief, apparently supported by considerable positive evidence, that polluted water was an important factor in the spread of cholera; but, on the other hand, of different groups of persons, Europeans or natives, soldiers or civilians, or even different regiments using the same water, some were attacked while others escaped, and some populations had drunk water obviously fæcally contaminated for years with impunity, and the use of filters seemed to make little, if any, difference. Nor during all the period to which these observations related had chemical or microscopical examination of air or water given any satisfactory evidence of a material causative entity. Equally negative were the results of observations on weather and meteorology, outbreaks of cholera occurring with equal frequency after heavy rains or periods of drought, of high or low barometric pressure, of hot, dry winds or monsoons; their course followed or opposed the direction of the prevailing winds, and they were distributed over every season and month in the year. European troops as a rule suffered more severely than the native regiments, but not infrequently the native civil population suffered while the sepoys escaped. Epidemics of cholera occasionally coincided with the prevalence of fevers, "enteric" or remittent, the cold stage of the latter passing into the collapse of cholera, and in some cases of cholera the skin had the yellow tint seen in yellow fever in the West Indies. There was no doubt as to the disease under certain circumstances extending to the lower animals. In 1875, at Delhi, during the epidemic 75 cats died with choleraic symptoms; at Lucknow the horses of the 19th Hussars suffered along with the soldiers; in 1846 carrion birds disappeared at Kurachee, and the corpses of the men of the 39th Regiment buried without coffins for lack of wood were left undisturbed by the hyenas. As to contagion or infection opinions differed, but in 1843–4 the disease was not in a single instance communicated to other patients in the same wards of the Buffs in Allahabad, in 1848 no medical officer or attendant contracted the disease at Cawnpore, and the same immunity was observed throughout the sixty-seven hospitals in India; while in Madras in 1865 numbers of both classes fell victims, and in 1861 at Mean Meer many of the orderlies were attacked, though the medical officers and native attendants escaped. Cholera frequently broke out among troops on the march, sometimes being apparently communicated to them by the populations through which they passed or by pilgrims whom they met, and at other times the reverse order seemed to obtain. The camping-out of troops when cholera appeared in the cantonments

had often been attended with the best results, but instances were not unknown in which it broke out in camps among troops who had previously been free. All attempts at land quarantine had proved unavailing to check the progress of the disease, absolute isolation being impossible. The influence of insanitary conditions in the origination of cholera, or, at any rate, in intensifying the disease when once it had been introduced, was a matter of general belief, but there were many instances on record in which regiments occupying barracks in most insanitary positions had escaped, whilst others whose surroundings were excellent had suffered, although the population of the filthiest quarters of the old towns had done so in a far less degree. "Regulations" had from time to time been issued and strictly enforced, but with varying and uncertain success, and no treatment could be considered in any sense specific, though experience showed that opium was worse than useless, while the administration of ether and ammonia, with small quantities of iced water, warmth to the extremities and friction, and dilute hydrocyanic acid to check vomiting, afforded some relief, while on the appearance of reaction continued application of warmth to the surface and the use of hot restoratives assisted recovery. Throughout his address the lecturer illustrated and confirmed his statements by instances given with place and date.

The PRESIDENT, in thanking Surgeon-General Gordon for his valuable historical record, expressed his belief that the very prevalence of cholera in India placed difficulties in the way of the study of the origin and spread of epidemics which did not exist in Europe, where the problems were presented in a simpler form.

Dr. KENNETH MACLEOD maintained that the epidemiological method of inquiry had completely failed in India to elucidate the causation and propagation of the disease, for which the pathological and bacteriological investigation of individual cases was necessary.

Dr. SCRIVEN was surprised that Surgeon-General Gordon had scarcely referred to pilgrimages as means in the spread of epidemics, and that he could have any doubt as to the influence of water in communicating the disease.

Dr. WILLOUGHBY felt that the value of the paper lay rather in the problems it suggested than in the facts it contained. Ever since his experience in the epidemic of 1866 he had made a study of cholera and he missed throughout the very conditions and circumstances on which he would have desired information, as those of the regiments attacked and spared, of the men's and women's quarters, food supplies, water, and of the camping grounds in which cholera did or did not occur, &c. He urged that, human intercourse being the chief means of spreading the disease, the direction of the winds and the course of rivers were irrelevant, and, believing in Pettenkofer's theory of ground water, he pointed out that rains after drought or drought after rains might have identical effects. Again, fæcal pollution of water in itself would not originate cholera, though it might intensify it, and Surgeon-General Gordon had not distinguished between this and specific contamination. Cholera, too, like typhoid fever, was not so infectious as smallpox was, though both were communicated by water and food if contaminated. Conclusions from microscopic examinations before 1879 were as worthless as appeals to Leuwenhoek 200 years ago, and such negative evidence counted for nothing against the exact observations of the last few years, while the history of every invasion of Europe and America placed beyond the possibility of doubt the conveyance of cholera solely by human intercourse, by fomites, and by the contamination of water supplies with the excreta of persons suffering from the disease.

SOCIETY OF ANÆSTHETISTS.

Observations on a Series of 550 Timed Nitrous Oxide Cases.

A MEETING of this society was held on Jan. 16th, Mr. G. HEWLETT BAILEY, President, being in the chair.

Dr. T. SYDNEY SHORT (Birmingham) read a paper entitled "Observations on a Series of 550 Timed Nitrous Oxide Cases." Complete records had been kept of 553 cases attending the Birmingham Dental Hospital; of these, 436 were females and 117 males, showing a proportion of 4 to 1. Their ages varied from six to fifty-nine years, the average age of the whole series being 22·5 years. The statistics presented were calculated from figures arrived at after considerable care and attention, and the whole series of numbers had been, to ensure accuracy, audited by a professional auditor. The methods of administration and of timing were described in detail, and the plan adopted to prevent possible fallacies was explained. The first part of the paper dealt with cases in which nitrous oxide was given alone. There were 411 of these—308 females and 103 males. The average length of the inhalation period of these cases was 49·4 seconds, and of the anæsthetic period 41·9 seconds. The males gave a longer period both of inhalation and anæsthesia—viz., 50·7 and 42·6 seconds, as compared with 48·3 and 41·3 seconds for the females. In 25 children of both sexes below thirteen years of age the average inhalation period was 41·7 seconds, and the anæsthetic period 33·3 seconds, the average anæsthesia of the boys being 2 seconds longer than that of the girls. The second part dealt with administrations of nitrous oxide mixed with air. Among the 553 cases there were 142 of these—128 females and 14 males. The average inhalation period was 50·5 seconds, and the anæsthesia 48·3 seconds. Here the anæsthesia of the females exceeded that of the males by 2 seconds, being 48·3 as against 46·6. Of children under thirteen years of age 17 took the gas with air; the boys had an average advantage over the girls of 1·5 seconds in the anæsthetic period. Fourteen patients of the whole series were over forty-five years of age; and their average anæsthesia exceeded that of the serial average by 5 seconds, showing that the length of anæsthesia may be expected to increase with age. In every period of life it was shown that when gas was administered alone males gave a longer anæsthesia than females. Eighty-eight cases giving a longer anæsthesia than 55 seconds were then discussed; and the paper concluded with a reference to the after effects of nitrous oxide, three cases being cited fully as having presented unusual and alarming symptoms.

Mr. WOODHOUSE BRAINE commented upon the low average of the number of teeth extracted—viz., three for so long an average period of anæsthesia as forty-two seconds. In his opinion the only true test for timing anæsthesia was the reaction to the application of pain; he did not consider the patient to be in an anæsthetic state because he did not lift an arm or open his eyes when told to do so.

Dr. DUDLEY BUXTON said his experience of giving nitrous oxide gas mixed with air was quite at variance with that of Dr. Short as far as jactitation was concerned. He found that air introduced into the system in proper proportion completely prevented jactitation.

Dr. HEWITT confessed that it was often very difficult to say when anæsthesia actually terminated, and for this reason he thought it hazardous to attach too much value to timed observations. He had found that the admission of but a small quantity of air during the inhalation of nitrous oxide invariably prolonged the inhalation period.

Dr. SILK said that it was almost impossible to fix upon any one sign as an indication of recovery, as there appeared to be in each case a variable period during which the patient was semi-conscious and incapable of resenting even painful impressions.

Dr. MAUGHAN said that in dental cases it was a matter of common experience for a patient to cry out while the first tooth was being extracted, but to remain perfectly still and motionless during the rest of the operation. He found that the return of sensibility to pain and the moment when the surgeon should cease operating were coincident with the return of the reaction of the iris to light.

Dr. SHORT, in reply, said that he had been surprised to find that the inhalation periods of the administrations of gas and gas with air corresponded so nearly; but there was no doubt that in the method adopted—that of giving a full breath of air at intervals—this was his actual experience, as proved by his figures. The occurrence of jactitation when air was admitted in this way had unquestionably been the case, and he could only suggest that the particular gas used might have influenced the character of the anæsthesia. The greatest number of teeth extracted during one administration of the gas was thirteen; the somewhat low average of extractions was probably due to the fact that it was becoming the custom for so many patients to take the gas for the removal of only one or two teeth. He had not come across any cases of metrorrhagia or renal trouble ascribed to the inhalation of the gas.

HUNTERIAN SOCIETY.

Exhibition of Cases.

AN ordinary (clinical) meeting of this society was held on Jan. 22nd at the London Institution, Mr. C. J. SYMONDS, President, being in the chair.

Dr. SHADWELL showed a case of Unilateral Spasm of the Face in a Woman. There was a history of previous hemiplegia of the same side. The spasms came on after confinement.

Sir HUGH BEEVOR showed a case of Tremor of the Hand in a girl aged sixteen years. The movements were athetoid in character, and probably functional in origin.—Dr. F. J. SMITH, Dr. DAVIES, Mr. COTMAN, and Dr. RAWES discussed these cases.

Dr. WOODS then showed two cases of Post-Herpetic Neuralgia of some years' standing, which he had treated by suggestion with very marked improvement.—Sir H. BEEVOR said these cases were two of his previously shown at the society, and corroborated the statements of Dr. Woods as to their improvement, which was, indeed, manifest to all the Fellows present.

Dr. FRED. J. SMITH showed (1) a case of Hemianopsia, and (2) a case of Motor Aphasia, and discussed the seat and nature of the lesions.

Mr. HOPE GRANT showed a case of Seborrhœic Eczema in a man aged thirty years.

Dr. ETTLES showed a case of Severe Acne.

Mr. OPENSHAW showed (1) a case of Congenital Dislocation of the Hip, (2) a Microcephalic Idiot with Talipes, and (3) a case of Pott's Fracture with Dislocation of the Foot Backwards.

A case of Contracture of the Arm following Severe Injury, and treated by division of tendons above the wrist, was shown for Mr. TUBBY.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Angina Pectoris and Pseudo-Angina.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 15th, Dr. W. B. RANSOM, Vice-President, being in the chair.

Dr. CATTLE read a paper on Angina Pectoris and Pseudo-Angina. He read notes of five cases, three in women and two in men, one of whom died in an attack. Cases of cardiac pain of a more or less anginoid and paroxysmal character might be divided for practical purposes into two main groups: cases in which the symptoms were mainly neurotic and in which the heart possessed fair contractile power; and, on the other hand, cases in which the neurotic element was but slightly marked, while there was grave reason to fear that the cardiac muscle was degenerate. Closely allied to the neurotic group were cases in which the pain might safely be said to be exo-cardial, such as intercostal neuralgia in hysterical subjects and some cases of gastralgia in which pain radiated along spinal nerves; these were cases of pseudo-angina proper. In this class of cases diagnosis was generally easy. It was also easy in cases in which angina was symptomatic of some easily recognisable disease of the heart or aorta. But it was often a matter of diagnostic difficulty to distinguish between some neurotic cases and cases of angina dependent on structural decay of the heart. The symptoms might be very similar while depending on very different causes, and to arrive at a correct prognosis and treatment all the symptoms surrounding a case had to be taken into serious consideration. Some cases of fatty heart were notoriously difficult to diagnose, and it was in persons past middle age, whose hearts might be apparently healthy although they suffered from angina, that the greatest caution in diagnosis was necessary.—Dr. RANSOM, Dr. TRESIDDER, Dr. BLURTON, Mr. PRYCE, Dr. COULBY, Dr. PESKETT, and Miss GRAY discussed the subject. Several speakers thought the reader of the paper had underrated the occurrence of angina in chronic renal disease.—Dr. CATTLE replied.

Mr. LAWS showed a boy aged seven years in whom Interstitial Keratitis had developed in the Right Eye after injury. It was thought he was also the subject of congenital syphilis.

The following specimens were shown:—

Mr. CHICKEN: a Vermiform Appendix removed from a child nine months old. Part of the cæcum had descended into a hernial sac. He also showed a Hæmato-salpinx containing Multiple Cysts. The right ovary had become twisted over and adherent to the left tube.

Dr. WILLIAM RANSOM: Photographs illustrating an extreme degree of Muscular Dystrophy in a young man. The parts chiefly affected were the face and the arms. The case did not conform to any of the usual types of muscular atrophy.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Unusual Eruption in Enteric Fever.—Fatal Case of Chorea.

A MEETING of this section was held on Jan. 17th, Dr. T. W. GRIMSHAW, President, being in the chair.

Dr. J. M. DAY read a paper on a case of Enteric Fever in which a peculiar rash resembling that of typhus fever was present.—Dr. J. W. MOORE said that when he first saw the case he had no hesitation in pronouncing it to be typhus fever, but the temperature chart now shown proved absolutely that it was enteric fever and not typhus fever. He never saw a case more like typhus fever in the early stage by reason of the number of the spots, their unusually dark colour, and their irregular size.—Dr. POLLOCK said he had seen several cases in which there was the rose-coloured rash all over the body, together with all the other symptoms of enteric fever, yet they were cases of typhus fever. The brain became rapidly involved, and all the cerebral symptoms manifested themselves.—The PRESIDENT gave some details of a case, apparently of typhus fever, but a fatal result produced by perforation proved that the case was one of enteric fever. He also mentioned a number of cases that occurred in Bishop-street, Dublin, in which both rashes coexisted simultaneously in the same patient, and he added that the late Dr. Kennedy believed that cases of mixed enteric and typhus fever sometimes occurred.

Dr. JAMES LITTLE related the particulars of a case of Chorea which proved fatal. The patient was a woman aged about twenty years.—Dr. ALFRED SCOTT found at the post-mortem examination some very small vegetations on the mitral valve, otherwise the heart and viscera were normal. The brain was removed and sections from various parts examined. In the large ganglionic cells in the motor area of the cortex a yellowish, degenerated patch could be seen, which was blackened by osmic acid. Dr. Scott thought that this degeneration was probably caused by fatigue resulting from the excessive choreic movements, and was not the cause of the disease.—Dr. DAWSON said he would like to ask Dr. Scott at what stage in the hardening process he made the section. He considered the degeneration like that which commonly accompanied insanity.—Dr. COX gave the details of a case of chorea occurring in a child. The faculty of speech was lost completely; the temperature rose to 104° F.; there was great wasting both of the muscles of the arms and the body; the patient was unable to support her head, and food was administered with great difficulty, so that it looked as if the case would terminate fatally. He tried bromide of potassium, but found it of little use. What had a decidedly good effect was Easton's syrup with arsenic. The strychnine he gave after some hesitation in the hope of stimulating the respiratory centre, for he feared that the respiration would stop at any moment. The patient eventually recovered. He believed that the spinal cord played as important a part as the brain in the production of chorea.—Dr. POLLOCK said he had given strychnia in chorea, but never found it of use.—Dr. PARSONS said that chorea in persons over twenty years of age is a rare affection. He thought that the vast majority of cases would recover if left alone. Only 3 per cent. of ordinary cases die, whereas when the disease occurs in people over twenty years of age, according to Dr. Gowers, who had collected a large number of cases, the mortality was 20 per cent. Death, he (Dr. Parsons) thought, was due to exhaustion.—Dr. LITTLE, in reply, said that the first drug employed in his case was chloral hydrate, but without any good effects. After its failure he tried other remedies.—Dr. SCOTT, in reply to Dr. Dawson, said that at the time of section the brain was half hardened. He used blue-black and also another form of blue stain.

Reviews and Notices of Books.

The Year-book of Treatment for 1896. Pp. 476. London: Cassell and Co. Price 7*s.* 6*d.*

THIS excellent manual needs no introduction. Within a short compass it gives a *résumé* of all the useful, and most of the useless, innovations in treatment during the year. It should be in the hands of every practitioner. In the section on Diseases of the Heart, the Schott treatment at Nauheim is examined from several points of view, and a full abstract given of an important discussion at the Edinburgh Medico-Chirurgical Society on the Relative Advantages of Strophanthus, Digitalis, and Allied Remedies. The few pages on the Sanitary Supervision of Tuberculosis in New York will attract attention. There is no doubt that New York attempts to effect that which is practically impossible in London; yet the gains resulting from the notification of tuberculosis may, after all, not warrant such an enormous extension of the duties of the sanitary officer. The treatment of tuberculosis with serum and nuclein and by intra-laryngeal injections is adequately described, and the results, positive and negative, so far obtained recorded.

Attention is rightly called to a remarkable case of pleurisy recorded by Dr. S. West, wherein after the pleura had remained full for over a year the lung was found not to be bound down, but capable of rapid re-expansion after tapping. The case is well described, and there is so much in it unlike the usually accepted views as to the results of fluid in the pleura as to merit close study.

In the section on Nervous Diseases a few more hypnotics receive their quietus, and the antitoxin treatment of tetanus a fair criticism. With regard to the latter the total number of cases is still far too small for any deductions of much value to be drawn. Dr. Sidney Phillips gives a valuable and important summary of the state of knowledge so far gained of the treatment of diphtheria by antitoxin, and after pointing out the apparently diminished mortality recorded by the great majority of observers lays due stress on the possibly added dangers following on the use of the drug.

A successful case of Laparotomy in Perforation of the Intestine in Enteric Fever, by Robert Abbe of New York, the second on record, is important. From post-mortem experience in enteric fever it is obvious that the number of such successful cases can be but few, and it is difficult to find any indications of likelihood of success during life. Craniectomy for Microcephalic Idiocy, which never seemed to hold out much hope of help, is now apparently laid to rest among the many dead operations. In striking contrast is the growing number of cases of successful surgical treatment of Perforating Ulcer of the Stomach, and two cases by Küster of Marburg are recorded where the ulcer was attacked before perforation, in both with success, on account of repeated hæmorrhage. The use of Murphy's button is fully discussed.

Mr. Edmund Owen's article on the Surgical Diseases of Children is full of useful matter. There are few now who will dispute his dictum that "every case of intestinal obstruction should be regarded as surgical, and in hospital practice should be sent as a matter of course to a surgical ward."

Dr. Herman makes available to English readers two valuable papers—the first an elaborate classification of Papillary Tumours of the Ovary by Pfannenstiel, the second a thorough investigation of Chronic Endometritis by Van Tussenbroek and Mendes de Leon, the latter especially introducing much that is new.

That the manual is kept well up to date is shown in the article on Public Health by the inclusion of references to Mr. Power's Interim Report on the Causes of Lead Poisoning, which appeared as late as September, 1895. Attention is also drawn to the fact that the principle of compulsory notification has been extended by the Factory and Workshop Act of 1895 to "lead, phosphorous, and arsenical poisoning or anthrax contracted in any factory or workshop." Notice of such must be sent by the medical practitioner to the chief inspector of factories. It is a most useful book for a busy man.

Phonographic Outlines of Medical Terms. Issued by the Society of Medical Phonographers. London: Sir I. Pitman and Sons. Price 1*s.* 6*d.*

SHORTHAND already holds an important place as an agent in medical education, it is extensively used by both practitioners and students, and there is a little journal, the organ of the Society of Medical Phonographers, published in phonographic characters. Much has been said and written on the subject of shorthand in medicine, and there can be no question that its extended use will be of distinct advantage to the progress of medical knowledge, but it is necessary that the system of shorthand used should be one that will be as legible when written as ordinary cursive script. That phonography possesses this advantage when legibly written and fully vocalised all acquainted with the art will admit, but to follow a speaker, even a slow one, it is necessary to have resort to certain abbreviations and other devices, and it is here that a danger arises. To minimise this danger it is necessary that all symbols standing for words should have a distinctive form, and with this object in view Phonographic Outlines have been compiled. The outlines chosen for about 2500 of the more common medical terms show evidence of careful thought, and the student who has the list at his finger ends will be fully equipped for taking reliable notes. The compilers have wisely deviated from the authorised system in some instances, as all practical, as distinguished from theoretical, phonographers do. Amongst other things the use of the downward *r* before *m*, even when not preceded by a vowel, will be found a distinct advantage. The backward *fl*, too, ought to be more freely used. On the whole the book can be thoroughly recommended; indeed, to the medical phonographic student who would get the utmost use out of phonography it is indispensable. The advantages of some of the outlines will not be endorsed by the professional reporter, but experience will teach the medical phonographer to what extent he may deviate from the useful standard list here drawn up.

Revue des Sciences Médicales en France et à l'Etranger. Dirigé par Professeur GEORGES HAYEM. XXIV. année. Tome XLVII., Fascicule 1. Janvier 15, 1896. Paris: G. Masson. Subscription 40 fr. per annum.

THIS very useful publication, which is published every three months, has reached the twenty-fourth year of its existence, and compares favourably with any of the retrospects of the medical sciences in this country or abroad. The treatises, memoirs, pamphlets, and papers analysed and briefly epitomised amount to no less than 333, under the several headings of Anatomy, Physiology, Medical Chemistry, Pathological Anatomy, Experimental Pathology, Pharmacology and Toxicology, Therapeutics, Hygiene, Internal Pathology and Clinical Medicine, Gynæcology and Obstetrics, Diseases of Children, Dermatology and Venereal Diseases, Alcoholism and Psychiatry, External Pathology and Surgical Therapeutics, Ophthalmology, and, finally, Diseases of the Larynx, Nose, and Ears. We speak from experience in saying that such a work as this, involving much labour in its preparation and arrangement, and only to be accomplished by the coöperation of many workers, is extremely useful, when carefully executed, to all those who are desirous of seeing what work has been recently done and what results have been obtained in any

department of medical science at which they are working or on which they desire to possess the most recent information.

LIBRARY TABLE.

The Report of the Department of Pathology of University College, London, June, 1895, together with a Collection of Papers and Abstracts published from the Laboratory. Vol. V. Edited by VICTOR HORSLEY, F.R.S., and VAUGHAN HARLEY, M.D.—This volume contains seven articles on neurological subjects, three on chemical pathology and metabolism, and one on bacteriology. Five of the seven on neurology are by J. S. Risien Russell, M.D., the remaining two being written by A. E. Levy, and by C. D. Marshall. The memoirs on chemical pathology are by Vaughan Harley, M.D., and the solitary one on bacteriology is by R. W. Boyce, M.D., and Nusserwanji Surveyor, M.D. Most of these papers have been noticed in our columns as they appeared in the Proceedings of the Royal Society, The Journal of Physiology, and other periodicals. In the report it is stated that the teaching in the chemical department is much hampered for want of adequate accommodation. It is convenient to have the memoirs proceeding from a particular school in a collected form.

A German-English Medical Thesaurus. By the Rev. HENRY LOSCH, M.D. Philadelphia: Published by the Author, 4109, Pine-street. 1895. Price $2.50.—Readers commencing the study of German medical literature may very soon find the ordinary German-English dictionaries quite inadequate to their requirements, and would, in fact, be helpless without the assistance of some special lexicon such as the above. Dr. Losch's work explains about 9000 German medical words; nominally it contains more than 10,000, but the first 500 are for the most part ordinary nouns and adjectives denoting abstract qualities, while the last 500 relate solely to every-day articles of food, clothing, and household furniture, and are to be found in any dictionary or traveller's vocabulary. Anatomy and pathology are adequately represented, but the list of surgical terms is so meagre that there is no mention of such frequently-occurring words as splint, trocar, cannula, drainage, stump, flap, crutches, tourniquet, lithotomy, lithotrite, aspirator, tracheotomy tube, perforator, stethoscope, and cautery. The German words are in Roman characters, and the author has introduced an absurd innovation by transliterating one of the German compound consonants as *sz*, whereas the Germans themselves render the same character by *ss* in books printed in Roman letters in Germany. Instead, therefore, of the usual orthography Fuss (foot) and Grösse (greatness), Dr. Losch prints Fusz and Grösze; moreover, he gives Füsze as the plural—i.e., feet—and says that it may be divided Fü-sze; but the fact is that a German printer would avoid dividing this word, just as an English printer would avoid dividing the dissyllabic plurals, "horses," "places," and the like.

The Medical Digest, or Busy Practitioner's Vade-Mecum; Appendix, including the years 1891-92-93-94, and to August, 1895. By RICHARD NEALE, M.D. Lond. London: Ledger, Smith, and Co. 1895. Price of the Appendix, 10*s.* 6*d.*; of the complete work (1840 to August, 1895), 18*s.* 6*d.*—Neale's Digest is so well known to the medical profession that in announcing the appearance of a further instalment of this indispensable work we have only to congratulate ourselves on being now for the first time in possession of a complete index to the English medical periodicals of the last four years and a half. The promptness with which the Digest enables an author or a reader to disinter an article or a reference from the vast accumulation stored in these journals is incredible until experience has proved it, while the busy practitioner will find it even more valuable for the concise suggestion of useful practical hints. The first edition appeared in 1877, the second in 1882, an Appendix was issued in 1886, and in 1891 the third edition was published in one volume, incorporating this Appendix with what had gone before, and making the work complete for the fifty years from 1840 to 1890. The "Digest" had by that date acquired a secure position among standard works of reference, and in acknowledging its utility, not only to the literary man, but to every active practitioner, we suggested[1] the desirability of Dr. Neale's work being continued as a permanent undertaking whenever from any cause the industrious and talented author found himself unable to carry it on. To make proper use of the Appendix the index of the edition of 1890 must be first consulted for any subject, and the corresponding section referred to in the Appendix to see if fresh matter has been added. If the index of 1890 does not refer to the subject sought for, then the Appendix index, in which new subjects are alone noted, should be consulted. Some corrigenda of the edition and index of 1891 are given at the end of the Appendix.

MAGAZINES.

The Psychological Review (January, 1896).—This review contains a polemical article by Professor Fullerton of Pennsylvania University entitled "Psychology and Physiology." In the writer's opinion it appears that the physiologist has hitherto been unwarrantably poaching on the domain of psychology. He states that in the absence of exact knowledge as to the functions of organisms physiologists are obliged to overstep the limits of their own science and drag in psychological material to fill up the unwelcome gap. Professor Fullerton divides his article for the purposes of discussion into two parts, and bases his argument on two hypotheses: (*a*) the parallel relation of mental and bodily states, and (*b*) the inter-connexion wholly or in part of the psychical and physical series. The conclusions arrived at are the same, however. The physiologist has a definite task—the study of the physical series; he has no right, says Professor Fullerton, to speak of sensations, of feelings, of ideas; they are not in his world. The writer selects Professor Foster's text-book as a representative work on physiology and subjects various extracts from chapters on the nervous system to a critical analysis in order to demonstrate that, when the anatomical and psychological portions are removed, the residue is surprisingly small. Science will not concern itself much with this quarrel, but will welcome from both sides anything that will tend to elucidate the mysterious relationship between body and mind. The other parts of the review mainly contain the results of psychological experiments undertaken at Harvard University.

Journal of the Sanitary Institute. Vol. XVI., Part 4.—This volume of the journal contains—in addition to interesting elementary lectures to sanitary officers on Trade Nuisances, Methods of Disinfection and Scavenging, by Professor Bostock Hill, Dr. Seaton, and Mr. Charles Mason—an article by Mr. Edward Patterson on the Hermite Process of Sewage Treatment as illustrated by its use at Ipswich, Lytham, and the Victoria Hospital, Netley, which should be useful to those anxious to obtain information on the subject. There is also in the journal a valuable paper on Putrid Gases as Predisposing Causes of Typhoid Infection, by Dr. Giuseppe Alessi, which has been translated by the Misses E. and C. Harvey. Dr. Alessi, after a series of interesting experiments, arrived at the following conclusions: "1. The inspiration of putrid gases predisposes the animals (rabbits, guinea-pigs, rats) to the pathogenic

[1] THE LANCET, June 27th, 1891.

action of even attenuated typhoid bacilli and of bacterium coli. 2. This predisposition is due to the combination of gases given out by putrid fermentations and not to any one separately. 3. It is probable that this experimental predisposition is diminished by prolonged breathing of the said gases."

The Journal of State Medicine, Vol. IV., No. 1.—A photograph of Sir John Simon, K.C.B., forms an appropriate frontispiece to this volume of the journal, the council of the Institute having awarded the first Harben gold medal to Sir John Simon in recognition of his eminent services to State medicine. It has been determined by the nomination committee that, in awarding the medal and lectureship founded by Mr. Harben, it shall be optional whether the two be conferred in any one year upon the same or different individuals, and it has been decided to offer the first lectureship to Dr. Roux of Paris. There are some interesting papers in the volume of the journal before us, and especially so is one in reference to Disinfection by Current Steam, as illustrated by Dr. Thresh's disinfecting apparatus. Our readers will remember that in a recent issue we were able to report very favourably upon this apparatus in our columns.[1]

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, ADAM SEDGWICK, and W. WELDON. London: J. & A. Churchill. January, 1896. 10*s*.—The present number of this journal is entirely occupied with one memoir: the Development of the Asterina Gibbosa, by E. W. MacBride, Fellow of St. John's College, Cambridge, which is illustrated by twelve plates, presenting many figures. The text and plates are the results of two years' work. Many of the specimens were obtained from Naples, and the author expresses his obligations to Professor Dohrn. All the stages were preserved in osmic acid and then in Müller's fluid, which made them brittle, but differentiated the tissues to such an extent that they looked like coloured diagrams. They were embedded in celluloidin and then in paraffin. In the earlier stages corrosive sublimate was used. The details do not admit of any abstract being made, but we may give the concluding paragraph of this important memoir. "The group Protocœlomata was a pelagic, cosmopolitan one and it is in accordance with what we know of wide ranging groups that some of its members should adopt changed habits and modified structure. The Echinodermata represent the earliest offshoot, which took to a sessile life and acquired radial symmetry. A little later the Hemichordata branched off, a burrowing life being adopted with consequent degeneracy. The main stem, however, remained pelagic, and gave rise to the Chordata. The Ascidians were the next offshoot and then came Amphioxus. We see, therefore, that the track of the great Chordata phylum through past ages is traced by examining those of its members who at very different periods of its history and at different stages of its evolution have forsaken their high vocation, and taken to a burrowing or sessile life, with the inevitable consequence—degeneracy."

The *Leisure Hour* has an interesting article, contributed by Sir E. Maunde Thompson, K.C.B., on the British Museum. Among the illustrations is a portrait of Sir Hans Sloane, M.D., F.R.S., whose collection of botanical and other objects of natural history formed a considerable part of the first treasures stored in our national museum.

The *Phonographic Record* contains a further instalment of Dr. Gowers' papers on Problems in Practical Diagnosis. The current issue is the first number of a new volume.

New Inventions.

PNEUMATIC SAVING SHEET.

I RECENTLY had an appliance made which has proved very valuable to me in my midwifery practice. It is a portable pneumatic bed cover, when uninflated and folded of no greater bulk than a ten-ounce bottle, but when unfolded and inflated forming a saving sheet 30 in. by 24 in. in extent. This seems

small, but I have found it is quite sufficient. It is somewhat kite-shaped in form and has an inflatable tube running round its edge except at the apex, which is flat for some three or four inches. By placing the sheet beneath the patient (undressed, of course) and above the ordinary bedclothes, bedding, &c.—having previously dilated the cushion—I have proved that every confinement can be conducted without the bed-covering, clothes, or carpets getting soiled or wetted in any way. The sheet can also be used for douching, irrigating, &c. It can be obtained from Messrs. Arnold and Sons, London.

Highgreen, near Sheffield. C. L. BIRMINGHAM, M.B. R.U.I.

THE CASE OF MR. LIONEL SMITH.

WE have been requested by Dr. Goodhart and Dr. de Havilland Hall to acknowledge the following subscriptions, which have been received by them, to this fund—

Dr. George Thomson	£2	2	0
Mr. Fawsett	2	2	0
Dr. Corns	1	1	0
Dr. Patterson...	1	1	0
Dr. Hodgson	0	10	6
Dr. Apthomas...	0	10	6
Rev. H. B. Wilder...	1	0	0
Mr. Howard Marsh	2	2	0
Dr. Wm. Hill...	1	1	0
Dr. B. Jones	1	1	0
Mr. J. Bruce Ronaldson	1	1	0
Mr. W. F. Brook	1	1	0
The British Medical Benevolent Fund ...	10	0	0

We have received at THE LANCET Office the following subscriptions additional to the £73 10*s*. 6*d*. already acknowledged:—

Dr. C. Coates...	£2	2	0
Dr. J. Kidd	1	1	0
Dr. R. Spence...	1	1	0
Th. B.	3	3	0
A Well-wisher	3	0	0

Dr. Goodhart and Dr. de Havilland Hall point out in their letter to us that, notwithstanding the kindness of those who have given liberal assistance, Mr. Lionel Smith, who starts to-day (Friday) for South Africa, will arrive at his destination practically penniless. This is no over-statement of the circumstances, and we beg our readers accordingly to send us further subscriptions. Arrangements have been made for forwarding them to Mr. Smith.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 1, 1896.

FEVERS ON THE WEST COAST OF AFRICA.

ALTHOUGH unfortunate events have recently riveted the attention of the English public—indeed, of the whole world—on the deadly fevers which prevail on the West Coast of Africa, the prevalence and the intensity of the malaria in that part of the world has only been too well known for many years. Indeed, one of the chief characteristics of the African continent, if we except its extreme southern portion, is the destruction caused to human life by these fevers. Wherever the soil is sufficiently moist and the temperature is high—conditions which are found combined over a large part of Africa—malaria prevails in deadly forms on the swamps near the coast and in deep, moist valleys in the inland higher parts. It is found in less severe forms on the elevated regions of the interior, and it is only in districts at a high altitude with exceptionally dry conditions of soil that it is never found. Wherever, therefore, a European enters Africa to the northward of the Cape Colonies he has to face the unavoidable danger of being attacked by a fever that imperils his life and is injurious to his strength. Although these facts are more or less known their gravity can only be appreciated by examining and comparing the records of explorers and medical men who have travelled in Africa. From whatever quarter, except the south, Europeans have entered the continent they have been met by this deadly malady. It was while studying the fevers that prevail in Algiers that LAVERAN made his famous discovery of the parasite which causes the disease, and the whole northern coast is more or less subject to malaria, which is very common near Alexandria at certain seasons. On the east coast, however, these diseases prevail, not only on the coast, but in swampy places up to elevations of 2000 feet. The country near Delagoa Bay is notoriously unhealthy, a remark which applies equally to the district of the Zambesi. Bagamoyo, the starting point for travellers into the interior, has been described by DUTRIEUX as "a veritable graveyard for Europeans." Senegal, Sierra Leone, and the Gold Coast are notoriously malarial to a high degree, and no European who lives in these parts can confidently expect to escape. The higher lands of the interior, although comparatively more healthy, are by no means immune. At the Victoria Nyanza malarial fever is found at an elevation of 4000 feet, and there is a good deal of ague in Uganda, which has an elevation of from 4000 to 5000 feet. Elevation affords no certain protection if it is associated with sufficient warmth and moisture of soil. Those who are familiar with the conditions of life which prevail at Sierra Leone and the Gold Coast and who have associated with those who have returned from these parts to England are familiar with the figures that tell of the grave loss of life which continued residence in these parts involves, and there are scattered through the literature which deals with Africa references to many facts which give us a precise idea of what the mortality actually may be. DAVIDSON'S Geographical Pathology deserves careful study by those who wish to have an accurate appreciation of what African climates really mean. In that book we find LIVINGSTONE given as the authority for the statement that on the Zambesi twenty-five out of 104 soldiers from Portugal were cut off by fever in one year. The Roman Catholic mission on the Upper Nile lost twenty-six of its agents in one year. SCHWEINFURTH says that half the travellers who went into the swampy districts of the Bahr-el-Ghazal and Bahr-el-Arab succumbed to fever. At Livingstonia on the shore of Lake Nyassa the mortality was so great amongst the members of the Scotch mission that they had to leave the district altogether. In the region extending from Vivi to Stanley Pool on the Congo some 200 Europeans had lived for six years, and 25 per cent. are stated to have died annually from fever. Figures like these apply to the worst parts of Africa. Other parts in which malaria occurs are affected more lightly. It scarcely exists in Cape Colony and barely in Natal. It is not uncommon, however, in the valleys of Zululand. There is a yearly fever season in Matabeleland, and one also occurs, mostly in the intermittent form, in the autumn and spring in Bechuanaland. The types of malarial fever in Africa follow the same general rule as in the other continents. In the central tropical regions with high temperatures the fevers are mostly, but not entirely, produced by the small quickly-growing parasite with a cycle of about twenty-four hours, in whose rapid growth, even within the twenty-four hours different stages of development occur simultaneously, throwing into the blood the poison associated with the maturation of the spores so continuously that the patient has often very brief or no remittence in the fever symptoms. The preference of this parasite for certain organs determines the nature of the symptoms. The liver especially seems marked out for attack, and in many cases it attacks the brain, in the latter respect presenting an analogy with the quotidian parasite which causes the pernicious fevers in the south of Europe. Apart from the direct action on the liver, the poison which is set free by the malarial parasite has a great tendency to produce symptoms of gastric irritation and retching. The conjunction of these symptoms produces the form of fever which is called by African writers bilious remittent. But this is not the only form of the parasite of malaria in Africa. Quartan fever is stated to be rare on the west coast, but tertian fever seems to be common in many parts of the continent. LIVINGSTONE'S first attack of fever, when he was at an elevation of 2900 feet above the sea level, was of a tertian type, and in Senegal tertian fever is common in July. More detailed information regarding the African parasites of malaria is still required, particularly regarding the quotidian parasite which produces effects of such severity. Dr. THIN has stated, in his remarks on the prophylaxis of malarial fever in our last number, that certain characteristics in the pigment formation have led him to suppose that it might possibly belong to a special variety, and in the paper published by him in THE LANCET of July 6th, 1895 (Fig. 13, *b*), he figured a white corpuscle from the blood of a patient at Sierra Leone in which the

arrangement of the pigment in rods differed from anything that he had observed in malarial blood from India and the South of Europe. The frequent complication of hæmoglobinuria would seem to justify this hypothesis. These questions of the morphology and varieties of the parasites of malaria in Africa will receive consideration from the many observers who will doubtless now devote themselves to the study of this aspect of the subject, but we know enough already to suggest measures of prophylaxis and cure which, although long indicated by results of experience, can now be rendered more precise in the light of our better knowledge of the etiology of the disease.

Between the great severity of the fevers of the west coast and the lighter forms of intermittent which are found in the more inland and higher districts, and also occasionally on parts of the coast, there are fevers which occupy a middle position. In Matabeleland, for example, in some years many of the cases are more like the usual ague. In other years they are of a low, bilious type, every man, woman, and child at one of the concessions being attacked, and even the natives suffering a good deal. Notwithstanding symptoms of great discomfort and considerable severity, including a dry, hot stage lasting sometimes more than twenty-four hours without relief, with intervals in the more severe cases of a low, muttering delirium, the mortality is not great, and contrasts markedly with that of the west coast.

The practical considerations which arise in connexion with these African fevers come under two categories. What are the measures available to prevent the attacks, and what is the most successful method of treatment? The treatment of these fevers is a subject which has been fully dealt with by various writers, and into which we cannot now enter in any detail. It centres itself largely in the method of administering quinine and the doses which should be given. We would only now remark that the analogy with the severe fevers of the South of Europe and the experience of practitioners on the coast show that the best chance for the patient consists in pushing quinine in very large doses. The time when the drug kills the parasite is when the young spore is set free. At a later stage the hæmatozoon appears to resist it successfully. It is necessary, therefore, in a case in which the parasite is being continually reproduced in enormous numbers that the blood should be kept saturated with quinine. It is very desirable that some innocent and safe method should be discovered by which quinine in large doses could be administered by subcutaneous injection without producing the local inflammation which is so apt to follow injections of the solutions which are at present available. The severe retching which accompanies many of these cases renders this very important.

The prophylaxis of malaria consists in personal hygiene and in the use of quinine. The power to become acclimatised and to recover from the debility which follows the fever depends so much on the strength of the constitution that only strong men should be selected for employment in malarial parts of Africa. The man with natural vigour and strong vitality under favourable conditions has a fair chance of regaining strength. The naturally weak man becomes the victim of cachexia, which predisposes him to fresh attacks. It is amongst men of this class that hæmoglobinuria is apt to occur. Sobriety, regular nourishing food, avoidance of great fatigue, and protection from the sun are measures which notoriously assist travellers and residents in overcoming the parasite, but even these important measures are not so important as prophylactic doses of quinine. Quinine is especially useful in those whose period of residence in malarial districts is likely to be short, and when the effect of long administration is to be less considered. Dr. THIN, in our last number, adduced some important evidence from the annals of the navy at a time when our suppression of the slave trade on the West Coast involved large sacrifices amongst our sailors. Many similar instances have been recorded by travellers. The late Surgeon-Major T. H. PARKE, in his "Personal Experiences in Equatorial Africa," states that about ten days before entering the mouth of the Congo each officer of the expedition was given four grains of quinine twice a day; and from the time they entered the mouth of the Congo, on March 18th, 1887, till they reached Stanley Pool, on April 22nd, a distance of 350 miles, there were but one or two cases of fever amongst the officers and no deaths, although the quinine was taken but very occasionally during this interval. The Belgian officers stationed at Stanley Pool found this exemption from fever extraordinary. The white officers of their caravans when on the same march had suffered incessantly from fever, and many of the number had died. "The result impressed us all," the author remarks, "so strongly with the value of prophylactic treatment that, so far as our stock of quinine permitted, we pursued it all through our entire expedition." Dr. CROSSE, in his "Notes on the Malarial Fevers met with on the River Niger," a small work which contains much valuable information regarding these fevers concisely arranged, remarks regarding quinine as a prophylactic that it ought always to be given. For those who live permanently in the country he recommends that six grains of quinine should be given every third day, and that after a long journey or other heavy work "a warm bath and a dose of quinine will go a long way towards preventing an attack of fever." The rationale of the prophylaxis of malaria fever by quinine consists in the fact, as Dr. THIN pointed out last week, that a very small proportion of quinine in the blood renders the soil inhospitable to the naked spore of the hæmatozoon, and it seems perfectly clear on theoretical grounds, as well as from the result of personal experience, that for those whose residence in malarial districts is only temporary, the larger the dose of quinine that can be taken without discomfort the less is the chance of fever, and it seems to be fairly shown that fever can be almost certainly prevented by a daily dose of quinine that can be taken for a considerable time without any derangement of health. Whether five grains daily is sufficient for this purpose remains to be seen, but it is quite certain that that dose, and probably a larger dose, can be taken for a considerable time without injury. Sir SAMUEL BAKER, a number of years ago, remarked at a meeting of the Royal Geographical Society, after a paper on African travel had been read, that without sulphate of quinine such journeys would have been impossible and the traveller would not have been able to return to tell his tale. The statement still

holds good and has more force now than it had at the time it was made. It will be so long before the levelling of bush, the clearing of forest, the drainage of subsoil, and the cultivation of the ground render an appreciable extent of tropical Africa safe for permanent residence that it is only by the parasiticide action of quinine that Europeans will be able to utilise the resources of these rich countries.

BY the death of Sir FREDERIC LEIGHTON—for so he will always be known, even if sentiment and etiquette are not equally right in withholding his baronial style—England has lost one of her most learned, graceful, and conscientious exponents of art, whilst the institution over whose counsels he so skilfully and assiduously presided has to deplore an admirable head, a man fitted by every possible quality, moral, mental, and physical, for the position to which he was called nearly twenty years ago. The medical profession, in common with all the cultured classes, will deeply regret that so admirable a public official, so capable and pleasing an artist, and so gifted and high-minded a citizen as the late President of the Royal Academy has passed from among us. He leaves a gap which it is no disrespect to his survivors at Burlington House to say it will be impossible to fill. There are Royal Academicians with genius, learning, and tact; there are Royal Academicians with high culture, broad sympathies, and deep knowledge of life; there are Royal Academicians to whom hard work is a source of delight and with whom industry is a second habit; but there is not one left who possesses to the ideal extent that Sir FREDERIC LEIGHTON possessed them all the qualities duly blended that should ensure success in the Presidential chair.

Medical men even more than members of the other professional classes are keen to mark the results of any occurrence that may work for the advancement or retrogression of pictorial art, for their devotion to this art is well known. The reasons for this are not hard to find. The opportunities that the medical man has for the gratification of a taste for pictures and the development of an instinct for art are very large. As a student the knowledge of anatomy, upon which we need hardly say figure-painting is based, is essential to his education, therefore he starts as a lad in a position from which he is able with honesty to criticise pictures upon points which escape the notice of many professional critics. And in his after-life he is brought into contact with pictures in a unique manner, even if he be not so fortunate as to possess them himself. It is the honourable privilege of the medical practitioner to be intimately acquainted with the private lives and domestic environment of his patients, and within the walls of their houses he sees a range of the art treasures of his country that are unfolded in this familiar manner to the gaze of no other class able to appreciate them. And the unpainted picture of nature is also hung for his benefit more than for that of other men. The country medical man spends most of his day driving in all weathers through all parts of the country, and to him alone among the cultivated classes do the lessons of such journeyings appeal in an artistic manner. The uneducated labourer and the half-educated carrier share his experiences somewhat, but the medical man alone among those to whom it is offered is able to appreciate the presentation of nature's face at all hours, whether burning in summer splendour, veiled in autumnal mist, or white with winter's snows; for it falls to no other class, being able to comprehend such calls on their imaginations, to be abroad at all times and all seasons. The love of the landscape is the country practitioner's solace.

But Sir FREDERIC LEIGHTON had a closer claim upon the medical profession than was constituted by his holding the post of titular head of the art with which its members have such deep sympathy. He was the son of a medical man, his father having died very recently at the advanced age of ninety-four, while his grandfather, Sir JAMES LEIGHTON, was for many years a resident physician at the Court of St. Petersburg. It was the desire of his father and grandfather that young LEIGHTON should be educated as a medical man, and it is conceivable that this would have been his future had he remained in England. But at the age of twelve the boy found himself in Rome, and at once acquired a strong bias in favour of art as a career. From this time forward he wandered about from one continental school to another, following this and that master, and attracted by this and that phase of his pursuit; but it was not until he was eighteen years of age that the idea that he should adopt art as a serious profession rather than medicine was settled, and to an American sculptor, HIRAM POWERS, belongs the credit of having spoken the words of approval that decided the father to allow the son to paint for a livelihood. With what success his efforts met from the beginning is indicated by the position which he held in the painting world abroad and at home. It is not within the scope of THE LANCET to give an account of Sir FREDERIC LEIGHTON'S work or an appreciation of his place in the hierarchy of painting; but, in conclusion, we may perhaps recall to our readers' memory one of his technical procedures because it appears to us to afford a remarkable example of honest laboriousness. It was his habit to paint all his draped figures first in the nude, and afterwards to paint the drapery over them. Now, whatever may be said against the artificiality and vapidity of some of his beautiful figures, with their porcelain complexions and elegant rotundities—those who prate most of his poorer work from this point of view lose sight of the classical and splendid correctness of his better—we have in this method an example of unlimited sacrifice of time and labour to the attainment of a high ideal. The practice cost him immense work, but he believed it to be essential to the proper presentation of the figure, therefore he did not grudge the labour. And therefore his beauty of line and exactitude of drawing must always command the admiration of those who know, and these are the very points upon which medical men do know.

THE Asylums Committee of the London County Council have in a recent report again called attention to the deficiency of the county provision for the pauper insane of the metropolis. It is stated that at the present time

there are 1200 insane London patients boarded under contract in various out-county asylums, and that arrangements had been made for the reception of about 900 patients in other asylums and licensed houses. These facts establish beyond question the fact that the accommodation for the insane provided in the London county asylums is still deficient, although provision for 10,780 inmates now exists at the five asylums—Hanwell, Colney Hatch, Banstead, Cane Hill, and Claybury—and a new asylum at Bexley Heath is about to be provided. The committee state that if the new and sixth county asylum at Bexley is completed before the end of this century the county of London will then have provision for 13,047 insane patients; but they make the alarming assertion that this provision will leave a deficiency exceeding by more than 2000 the number of the insane that will, according to their estimate, require accommodation on Jan. 1st, 1900. On the basis of this estimate the committee assert that the London County Council would not overtake the probable requirements of London lunacy even if they obtained a site and proceeded to erect a seventh asylum forthwith—and they ask for authority to take this course. In face of this proposal, and the enormous increase of county expenditure it implies, it will be well to consider briefly the grounds on which the Asylums Committee estimate that the pauper insane in London will number 15,118 on Jan. 1st, 1900. In the last annual report issued by this committee it was shown that the total number of the certified insane for whom the county of London is responsible to make asylum provision increased from 10,104 on Jan. 1st, 1890, to 11,668 on Jan. 1st, 1894; it now appears that the number of the certified insane had further increased to 12,118 on Jan. 1st, 1895. Thus the increase in the five years 1890-95 was 2014, and equal to 403 per annum; this increase ranged from 152 in the year 1891 to 833 in 1893, when the increase was undoubtedly in great measure due to the opening of the new Claybury Asylum, causing the certification of cases of previously uncertified lunacy. It should also be noted that if account be taken of the total number mentally deranged in the London population (including those in workhouses and asylums for the imbecile) the increase is almost identical with that of the certified insane; it averaged 400 per annum during the same five years. The marked increase of recorded insanity during the year 1893 is in part attributed by the Asylum Committee to the effect of the severe epidemic of influenza, and but for the exceptional increase in that year the annual increase during the five years would have fallen considerably below 400. The committee, however, estimate the annual increase ("at the ascertained rate of increase") to be 600 per annum. We see no justification for this estimated increase, which appears to overstate by at least 1000 the number of additional cases that will have to be provided for during the five years ending Jan. 1st, 1900. We doubt very much whether the increase of 403 per annum during the five years ending Jan. 1st, 1895, will be maintained, and entirely deprecate the alarmist estimate of the County Council. The census tells us that there is still a large reserve of unregistered mentally deranged persons, including those living with relatives and others, which has, however, been steadily reduced in recent years by more complete registration, causing an increase of recorded cases often mistaken for increase of insanity. Moreover, the reduced death-rate of the insane continues to cause accumulation of cases, increasing the number of existing insane which should not be attributed to increase of occurring cases of insanity. In 1891 the number of London cases of insanity reported by the Lunacy Commissioners was 16,536, and equal to 3·95 per 1000 of the population; and at the same rate of insanity the cases in 1900 would be 18,229, giving an annual increase of less than 200 in the nine years. Allowing, therefore, for an increase due to more complete registration of cases, which is in constant operation, but which cannot be regarded as permanent, we should be inclined to expect an average annual increase during the last half of this decennium not exceeding 300, which is just half the estimated increase for which the Asylums Committee are now desirous to make provision.

Annotations.

"Ne quid nimis."

THE DEATH OF PRINCE HENRY OF BATTENBERG FROM AFRICAN FEVER.

THERE is very little doubt that the diseases of the Gold Coast are more or less connected and interdependent, hanging together, as it were, on a malarial thread. The fevers of that climate are but the varied expressions of one and the same cause, to which must be superadded the exhausting effects of an African sun and an extremely moist atmosphere. Everyone recognises in ague an intermittent fever directly attributable to malaria, but the continuous form of fever or that variety of it in which there are remissions—the temperature falling perhaps two or three degrees in the morning, but always remaining above the normal—belongs to the same category. We may even go further and say that in that part of Africa fever and dysentery homologate. The degrees of severity of African fevers may probably be explained by differences in the dose or intensity of the poison to which the sufferer has been exposed and the degree of congestion of the internal organs and the constitutional febrile reaction set up; but the tendency of all severe African fevers is to cause prostration and collapse, to be attended by recurrences and relapses, and to give rise to congestive or inflammatory swelling of the liver and spleen and, not infrequently, to blood-clotting or thrombi in the large vessels of the thoracic or abdominal organs. The explanation of the reason why fresh arrivals in tropical or sub-tropical climates are so liable to attacks of fever—and that they are peculiarly liable is recognised by such expressions as "seasoning fever" so commonly used—is probably to be sought for and found in two directions. The new-comer has to rapidly accommodate his system to a perfectly new environment of a trying physiological kind, while the native population or residents in a place have acquired a relative immunity or tolerance of climatic disease-causes by long exposure to them. Where the exposure has been to some concentrated form of malarial poison the constitutional reaction will be proportionately rapid in its manifestation and severe, or even fatal, in its effects; whereas, when smaller amounts or repeated very minute doses of the disease-cause have from time to time been imbibed, the morbid phenomena set up

are not only less in amount but later in appearing, the latent period is longer, and the manifestation of the disease depends probably upon the occurrence of some exciting cause or other. It is quite possible that Prince Henry of Battenberg and Major Ferguson, for example, may have, for all we know, contracted their diseases as the result of one and the same exposure, the latter having imbibed the larger or more concentrated dose. The description given us of the unfortunate Prince's illness would indicate that it was the outcome of a severe malarial infection. It was recognised from the first that this was so, and he was, much to his disappointment and against his will, wisely ordered to return at once to the coast. The rise in temperature and other symptoms were indicative of a severe attack, and when the Prince reached Prahsu he was in a prostrate condition, his temperature reaching 105° F., which was much reduced by judicious sponging. On reaching Mansu the temperature had again increased, reaching 106°, and his condition was even critical for a time, but there was again a fall. At Cape Coast Castle his illness had quite naturally been followed by some symptoms of nervous and vascular prostration, but he rallied after his embarkation for Madeira and apparently expressed himself as hopeful of recovery. Unhappily, this was not to be. We do not know what ranges of temperature the temperature-chart showed, but we do know that the cause of the fatal illness had not, and unfortunately could not, have been eradicated, that there was a relapse with attendant exhaustion, and that the patient peacefully passed away. In the absence of positive information we may conjecture that there was some blood-clotting of an internal organ which, in the Prince's state of nervous prostration and physical enfeeblement, caused his death, to the extreme regret of all those about him and subsequently, when the fact became known, to that of this and other nations. It is quite untrue, as we know on the highest authority, that his Royal Highness was hurried down from the front in deference to any order from this country. All that was done for the Prince was under the best medical advice available, and entirely, of course, in his interest.

THE STATUS OF MEDICAL OFFICERS OF HEALTH.

THE county borough of Wigan had recently occasion to appoint a medical officer of health, and the sanitary committee recommended that a gentleman should be appointed, at a salary of £300 per annum, to give his whole time to his duties, including attendance upon the patients in the Borough Fever Hospital. The report of the sanitary committee was presented to the town council and led to an animated discussion. One of the members thought the salary was too small, whilst another urged that there were plenty of ambitious medical men who "would be glad to accept the post," and who would give "them, at any rate, four or five years of his services, and they would reap the benefit of it." The majority of the members appeared to agree with Mr. Alderman Richards, who objected to employing the whole time of a medical officer, and who regarded the proposals of the sanitary committee as "a scandalous waste of public money." Waxing eloquent, the worthy alderman is reported to have said that in four years the medical officer's salary, if increased at the rate of £25 per year, "would be brought up to the level of the borough treasurer, the gas engineer, the town clerk, and the borough engineer. Now, all these gentlemen would have a great deal more to perform than the medical officer of health, and their duties required *a much higher rate of ability*." There is a refreshing air of candour about the latter statement, and it is noteworthy that it was received with expressions of approval. Is this the sum total of the results of the efforts of the General Medical Council to secure the better qualifications of applicants for public health appointments? After spending four years at least in the study of medicine and surgery, and an additional year in grappling with the problems of public health, and so qualifying himself to take charge of a fever hospital and to look after the public health of a county borough, it is depressing to be assured on such eminent authority that the duties required of him do not need so much ability as is necessary for managing a gasworks or keeping roads in repair. Either Mr. Alderman Richards is wrong, or the General Medical Council is over-rating the amount of knowledge necessary to discharge the duties of a medical officer of health. What, however, can we expect from a town which, according to a Local Government report dated 1892, during the prevalence of an epidemic of typhus fever, burnt the effigy of the chairman of the sanitary committee because he advocated the erection of an isolation hospital, and in which the hospital since erected is commonly known as "Phillips' Folly," Mr. Phillips being the chairman referred to? It is to be regretted that such gross ignorance should exist, but doubtless as the knowledge of the importance of sanitation and of the duties discharged by a medical officer of health become better known they will be more highly appreciated even in Wigan. We may congratulate ourselves, however, that at the present time there are few localities in the British Islands where the duties of a health officer are so lightly esteemed as in this Lancashire borough.

SKIMMED MILK AND TYPHOID FEVER.

IN THE LANCET of April 21st, 1894, attention was drawn by means of a valuable article by Dr. J. J. Welply on Creameries and Infectious Diseases to this increasingly important subject, and in the last annual report of the State Board of Health of Massachusetts there is an interesting paper from the pen of Professor Sedgwick, Ph.D., biologist to the Board, dealing with the same matter. In the autumn of 1894 an outbreak of enteric fever occurred at Marlborough, Mass., as also in the village of Payville, which abuts upon that town. Suspicion was first attached to the water-supply as a means of dissemination, but upon Professor Sedgwick visiting the district at the request of the local authorities concerned he was able to demonstrate by the geographical distribution of the cases that neither infected water nor infected sewer air was capable of explaining the outbreak. On attention being turned to the milk-supply it was discovered that in the middle of the invaded area was a "creamery," the proprietor of which bought milk from some twenty-eight different farms in the vicinity, and after separating the cream therefrom, was instrumental in distributing the skimmed milk over a considerable section of the town. This milk, owing to its cheapness, was extensively purchased by the lower classes, chiefly perhaps for cooking, but also in large part for drinking purposes. A personal visitation of the invaded houses soon established the fact that the skimmed milk service was responsible for the outbreak, and it was found that the cases were confined to those of slender means—i.e., to those who were of necessity the purchasers of the cheap skimmed milk. This last-mentioned fact considerably complicated the inquiry, inasmuch as the false pride of the people made them unwilling to admit that they were consumers of the skimmed milk. The total number of cases during the epidemic period (Aug. 1st. to Sept. 15th) was 50, including 1 case which had been imported. Of the remaining 49 no less than 47 were found to have access to the skimmed milk, buttermilk, or cream from the creamery, and it was not improbable that the remaining 2 had also partaken of the creamery milk. Of these 47 cases, 45 had access to skimmed milk, 1 to buttermilk, and 1 to cream. No cases of

typhoid fever occurred in the farms from which the "whole" milk was supplied, and it would seem, from the absence of any specific reference to the matter, that all the cows supplying the milk were free from any diseased condition. In the creamery itself, however, there was a case of enteric fever, and, although this case was not notified until Aug. 28th—i.e., four weeks after the first case—the patient seems to have been ill for a considerable time before Aug. 28th, and an inquiry into his symptoms led Professor Sedgwick to the conclusion that his illness might not improbably have been the cause, rather than one of the consequences, of the outbreak. If this be so, it would seem that this man must have been in an infective condition somewhere about the middle of July; in further support of this view is the important fact that the man was the driver of the skimmed-milk waggon, and that he was intimately associated with the manipulation of the skimmed milk. In this outbreak, as also in the one related by Dr. Welply, to which we have already referred, there was no evidence incriminating the butter. This is a very interesting point, and it has an important bearing on the question of foreign butter and the conditions under which it is manufactured. Perchance the acidity of the butter may be hostile to the vitality of the typhoid fever bacillus. As Professor Sedgwick observes, we have yet to obtain satisfactory evidence of the conveyance of typhoid fever by this medium; it is, however, well to bear in mind the possibility of its conveyance by butter in all outbreaks of milk-borne typhoid fever.

"POISONING BY GAS IN SEWERS."

SUCH was the title of an excellent paper by Dr. John Scott Haldane which appeared in THE LANCET last Saturday, Jan. 25th. "Three deaths from inhaling sewer gas" was the heading of a paragraph which appeared in the daily papers on the following Tuesday, the 28th. Who is responsible for allowing men to jump into what proved to be death-traps at East Ham (which was the subject of Dr. Haldane's report) and as just reported at Widnes? Surely, as we hope, the men appointed to undertake this operation are warned and instructed not on any account to descend until they have ascertained whether the air in the sewer is or is not dangerous. And to decide this is a simple matter. The absence of the supporter of life—viz., oxygen—is indicated by the not very difficult experiment of lowering a candle into the sewer, or, better still, a safety lamp, since the gases in the sewer are often inflammable. The proportion of combustible gas may be ascertained by observing the extent of the luminous effect produced upon the colourless flame of Professor Clowes' hydrogen lamp, which will indicate as little as 0·5 per cent. of coal gas, and the presence of poisonous sulphuretted hydrogen is readily shown by moist lead paper. A man should not be deemed qualified to undertake the examination of sewers until he gives evidence that he can perform these simple tests. Nor in any case should a man be allowed to descend a sewer opening without a rope round his body. In regard to the sulphuretted hydrogen test we would suggest the use of a slab of plaster-of-Paris soaked in lead solution in the place of lead paper. It is extremely delicate, and is more easily and conveniently applied to the testing of man-holes, deep wells, &c., than paper. The slab dries readily, and has merely to be moistened before use. On account of its greater weight it can be lowered without touching the walls of a sewer-opening, and any stain produced by sulpuretted hydrogen gas is not obscured by contact with dirt. We strongly urge that a copy of plainly printed directions on the above lines should be placed in the hands of sewermen, and the authorities who employ them should make it their business to see that these directions are understood and will be carried out. Experience is teaching that the operations in a sewer should be conducted with just the same precautions as are imperative for the safe working of a coal mine. In the name of common humanity why is not this lesson taken to heart?

THE PERILS OF ADVERTISEMENT.

DR. KRAUSE, *privat-docent* in the Medical University of Berlin, has tendered his resignation under the following circumstances. It seems that soap is well-nigh as lavishly advertised in Germany as it is with us, and an enterprising firm of manufacturers succeeded in inducing Dr. Krause to allow his name to appear at the foot of a testimonial. The attention of the Faculty having been called to this indiscretion, Dr. Krause was called upon to furnish explanations. He declined to do so, or even to express regret, and when the Faculty, justly indignant, inflicted upon him the severest reprimand at its disposal he threw up his appointment.

MILITARY MANŒUVRES ON MANURED FIELDS.

DR. H. HENROT, Mayor of Reims, has drawn up a report on the epidemic of typhoid fever from which two regiments of dragoons quartered in his town recently suffered. Dr. Henrot is a prominent member of the Société de Médecine Publique et d'Hygiène Professionnelle and a *persona grata* at all the International Congresses of Hygiene. The *Revue d'Hygiène*, which is the organ of this influential French society of sanitary reformers, gives a summary of Dr. Henrot's report, and it contains a valuable suggestion. The dragoons were quartered in fairly healthy barracks. One of the barracks was quite a new building, and to all appearance the sanitary conditions were excellent. The water-supply was also good, though it was discovered that of 180 wine-shops in the soldiers' quarter thirty of the wine-sellers or publicans made use of well water instead of the town supply. But if these wells had been contaminated the civil population and the soldiers of the 132nd Infantry of the Line, who frequented the same wine shops, would also have suffered. Dr. Henrot explains that the contents of the *tinettes*, or portable metallic pails, and of the cesspits of the town are emptied directly and in a crude state on to cultivated land. This human manure is immediately absorbed and covered over by raking or ploughing. But last year, in consequence of the exceptionally dry weather, the earth could not be raked; there was no moisture, and, in the absence of rain, the manure was desiccated on the surface of the hard soil. During the course of the manœuvre the two regiments of dragoons passed over some of these lands. The hoofs of their 1600 horses soon trampled the manure into a fine powder, which, blowing up as dust, was breathed and swallowed by the troopers. That this dust was different from ordinary dust was rendered evident by reason of the very unpleasant odour which was noticed at the time. The manœuvres took place from Sept. 6th to Sept. 12th. Since Jan. 1st, 1895, the health of the troops had been excellent. On Sept. 20th the typhoid fever commenced. Among the 1600 dragoons who manœuvred on the field manured with human excrement there were 112 cases of typhoid fever resulting in twelve deaths. The civil population and the other troops quartered at Reims were not affected. It is also a noteworthy fact that during this epidemic pulmonary complications were also very frequent among the dragoons; and this strengthens the supposition that the poisonous nature of the dust swallowed was the cause of the mischief. Dr. Henrot is communicating with the military authorities so that precautions may be taken in the future, and soldiers be not allowed to manœuvre in dry seasons on land which has been manured with human excrement. In the

north of France it has often been noticed that typhoid fever followed closely upon the autumn manœuvres, and there also fields are frequently manured with the crude contents of pails and cesspits. But to Dr. Henrot appertains the credit of having suggested the connexion between this cause and its probable effect.

MALINGERING IN CHILDREN.

THE typical schoolboy has long been known as a fairly skilful malingerer when occasion demands it, but his shamming is usually confined to the more homely complaints of headaches and toothaches, which are capable of rapid dispersion when the crisis which necessitated their presence is past. The children of Nassington—a village in Northamptonshire—however, go more carefully and deeply to work in order to avoid the toils of school. On account of the number of children who were kept from school because of a rash on their bodies Dr. C. N. Elliott, the medical officer of health of that district, was asked to examine them with a view to finding out the nature of the strange disease. His report showed that the whole affair was a case of malingering. The children, about twenty-five in number, were suffering from no real disease, but in order to stay away from school they had rubbed their hands and arms with the juice of the plant called "Patty Spurge." The result of this was that a vesicular eruption appeared which in most of the cases resembled a herpetic eruption, but in some there were blisters as large as half-a-crown. As the children appear to be studying the physiological effects of plants a closer knowledge of the birch-tree and its branches might possibly divert their energies into another channel or at any rate dull their keenness for practical botany.

DEFECTIVE DEVELOPMENT OF THE CEREBELLUM.

IN the recently issued number of *Brain* Dr. Risien Russell publishes an account of a curious case of mal-development of the cerebellum in a puppy, and also gives an account of the naked-eye and microscopic appearances of the diseased organ. The puppy was one of a litter all similarly affected. The parents were healthy, and were, indeed, prize dogs. During life there was great incoördination, so that in walking the animal fell sometimes in one direction, sometimes in another, and while standing, or even sitting, there was almost constant oscillation of the head and trunk. There was thus clear indication of cerebellar disease, but nothing to suggest that one side was more affected than the other. The animal was killed by an overdose of chloroform and its nervous system carefully examined. The specimen was placed in Müller's fluid, and sections were subsequently cut in celloidin and stained in various ways. On examination the cerebellum was found to be much smaller than it should have been, being about three-quarters the size of the cerebellum in a normal puppy of the same size. But it was quite symmetrical, and its convolutions and sulci appeared to be quite as well differentiated as in the normal organ. Section through it showed the proportions of grey and white matter to be unaltered in some places, the grey to preponderate in some and to be much diminished in others. Microscopic examination of different parts confirmed this and further showed the different layers of the cortex to be variously altered in their relation to each other. Thus in one part the molecular layer was three or four times the proper depth as compared with the normal or with the granular layer; in another the extent, both absolute and relative, of the two layers was as nearly as possible normal, while in other places the molecular layer was of much greater depth than normal, the transition between this condition and that in which the molecular layer was much smaller than normal being quite abrupt. The same applies to the granular layer, and there were great changes in the appearance and arrangement of the cells of Purkinje. In large areas of the cerebellum these were completely absent, in other parts an occasional cell was visible, while in a few places irregular groups or clusters were present. In some places there was a tendency to the usual arrangement of these cells in a single line between the molecular and granular layers, but even in those places the distances between the cells were very irregular and often much greater than normal. The cells also were altered much in both size and shape. They were fewer in number in the lateral lobes of the cerebellum, whereas in the middle lobe they were more plentiful and also more regular in arrangement. The medulla, spinal cord, red nucleus, optic thalamus, cerebral cortex, and auditory nerve and labyrinth showed no changes from the normal, and even the cerebellar peduncles and the corpus dentatum, except that the former were smaller than usual, showed no alteration. Dr. Russell, in conclusion, contrasts the condition found in this case with that which existed in a cat with a unilateral defect of the cerebellum which he had recently examined. In the latter there was marked affection of the corpus dentatum on one side and of the opposite inferior olive, each being much reduced in size, the latter, indeed, represented by only a few cells, whereas in the puppy the defect was limited to the cortex. From a consideration of both cases it is evident that a close relation subsists between the corpus dentatum and inferior olive, while the inferior olive and the cells of Purkinje seem to be quite independent of each other.

LUDWIG AND VITALISM.

PROFESSOR BURDON-SANDERSON has given an interesting lecture at the Royal Institution on Ludwig and the valuable contributions which he made to science. The lecturer particularly spoke of the usefulness of Ludwig's habit in referring natural phenomena to their various natural laws, and so tending to do away with the methods of explaining the unknown action of phenomena by meaningless terms and phrases. One such term much used before Ludwig's time was that of "vitalism," and whenever some difficulty had to be explained it was managed by saying that the action in question was due to a "vital force," which was a state of things which necessarily hampered any true advance of scientific work. Ludwig and his contemporaries, recognising the shallowness of this form of explanation, contended that no explanation of any observed process or event was to be accepted excepting that which consisted in referring it to chemical or physical laws. Thus Ludwig, among his many works, may be said to have materially helped to place science on a sounder basis than existed before his time.

NOXIOUS TRADES.

WE earnestly commend to the notice of the Departmental Committee appointed to inquire into dangerous trades, whose invitation for witnesses we announced two weeks ago, the liabilities of those engaged in compounding arsenical preparations used for dipping sheep. According to the *West Ham Herald* large quantities of arsenical sheep-dip are made in certain East-end factories, where, "in spite of every precaution—the use of overalls, silk handkerchiefs for the face, proper ventilation, and washing arrangements—the deadly powder penetrates to the skin, works into the finger-nails, and clogs the men's eyes." It is impossible for men to work long under these horrible conditions without bringing their health to absolute ruin. We have frequently examined these powders, and find that the

composition of a great number of them is sulphur in intimate mixture with white arsenic combined with alkali to make it freely soluble. It is, in fact, crude arsenite of soda, a most powerful poison, mixed with sulphur. It is an excellent remedy, we believe, for scab and tick, but owing to the extreme risk attending the exposure of the sheep to such a deadly compound, it is now being replaced very largely by certain compounds of equal value as a remedy, but otherwise comparatively innocuous. We refer to the solutions of tar acids (chiefly cresylic) in alkali which form milky fluids with water. Is there, then, any necessity for further carrying on such a dangerous trade as the compounding of arsenic, sulphur, and alkali exclusively for sheep-dipping purposes when equally effective yet harmless preparations are available? We think not. At any rate, if it must be continued it is for the Departmental Committee to investigate and report upon the disastrous effects which the manufacture of this compound has upon the health of the operatives, and to urge the Government to put into force measures to immediately stop such dangerous employment.

THE PUBLIC AND DISINFECTION.

THAT the man in the street has yet much to learn concerning his duty towards his neighbour is shown by a case which came before Mr. Plowden at Marylebone Police-court upon Tuesday last. William Chapman owned or leased a house in Mansfield-road, and in this house his child Frank Chapman had some six weeks ago suffered from diphtheria. Notice had been given that the premises were to be disinfected; but Chapman had disregarded the notice. To make matters worse, he had transferred the house to a Mrs. Allen, who was ignorant that any infectious disease had occurred there, and the premises were used as a public-house. Thus there was every advantage for the spread of infection. We are glad to see that a fine of £5 and £2 2*s.* costs was inflicted. Those who wilfully refuse to take measures for preventing the spread of infection are generally the first to cry out when the sanitary authorities take precautionary measures, but if householders will not comply with the requirements of the law some one else must do it for them.

EPIDEMIC POLIOMYELITIS.

IN the *Journal of the American Medical Association* of Jan. 4th is an article by Dr. C. S. Caverly on the results of an investigation of an epidemic of acute anterior poliomyelitis which prevailed in the State of Vermont, chiefly in a single valley, during the summer of 1894. At the time there was some doubt as to the diagnosis of the disease, but further investigations and opinions have cleared up difficulties of diagnosis which at first existed. The epidemic invaded the valley in the early summer. It prevailed with increasing severity during July, apparently reached its climax about Aug. 1st, and steadily declined until about Oct. 1st, the last case occurring early in that month. The early summer was popularly considered to be unusually hot and dry, but the statistics of humidity and temperature show little variation from the average. The territory mainly covered by this outbreak is a portion of the Otter Creek Valley about thirty miles long and from twelve to fifteen miles wide. The city of Rutland is the chief town of the area. The towns affected have a combined population of 26,000. The starting point of the epidemic was at Rutland. In this city occurred 55 of the 132 cases of which Dr. Caverly has notes; 27 of the remainder occurred in a small town, Proctor, with a population one-sixth that of Rutland. This town suffered the most of all in the valley. The remaining 50 cases were scattered over the rural districts in fourteen towns. Defective drainage in general did not seem to influence the distribution of the disease. The water-supply was excluded as an etiological factor. That the general sanitary surroundings and methods of living were in any wise responsible for the outbreak is also more than doubtful, since the disease showed no partiality to that class of the population whose habits and surroundings are the most insanitary. The geological formation of the valley is not peculiar. The prevailing formation is limestone. Dr. Caverly gives four cases illustrative of the types met with. Of the 132 cases 18 died; 10 deaths were among males and 5 among females; the sex is not stated in 3. Seven of those who died were known to have been under six years of age, three between six and fourteen, while one died at nineteen, two at twenty-one, one at twenty-two, and one at thirty-eight years. The percentage of deaths among adults was high. Thirty cases were known to be maimed for from six to nine months after the initial attack. The muscular atrophy in most of these cases was marked. It is an interesting fact that during this epidemic, and in the same geographical area, an acute nervous disease paralytic in its nature affected domestic animals. Horses, dogs, and fowls died with these symptoms. This epidemic is of importance in several particulars: (1) from the simple fact that it was an epidemic of acute anterior poliomyelitis; (2) from the great number of cases occurring; and (3) from the simultaneous affection of the lower animals.

THE SOIL.

THE Hungarian Journal *Gyogyászat* (Therapy) of Dec. 28th, 1895, gives a long abstract of the address by Dr. Poore on "The Soil in Relation to Health and Disease," which appeared in our columns on Dec. 14th, 1895. In reference to this paper and to Professor Haffkine's communication on preventive inoculations against cholera the editor, Dr. Schächter, in his leading article says: "There is a most interesting and important question which an article in our columns deals with—viz., The Soil in its Relation to Disease. The Pathogenity of the Soil was the argument for the propagation of cremation at our last Congress of Hygiene, but the unbiased hygienist does not see the fountain head of diseases in the soil. Quite contrary, he sees the fountains of life and health. He has from a higher point of view that 'love of the earth' which Zola believes is instinctive in human nature. And if once the great hygienic importance of the soil is better appreciated all round, it will perhaps become superfluous to speak more of preventive inoculations against cholera." Dr. Poore's work on this subject appears to have been much appreciated in Hungary, the prosperity of which is mainly dependent upon agriculture. We are pleased to hear that a Hungarian Translation of Dr. Poore's "Essays on Rural Hygiene" is shortly to make its appearance.

THE BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

THE inaugural meeting and conversazione of the British Balneological and Climatological Society were held at Limmer's Hotel on Jan. 22nd. This new society, which was founded on Nov. 9th last with the object of promoting good fellowship among medical practitioners connected with British health resorts and with other branches of the profession, to encourage the study of balneo-therapeutics and medical climatology, and to advocate and sustain within the profession the interests and claims of British climatology, promises to hold an important place among the various societies which have for their object the progress of the healing art. Sir Edward H. Sieveking is Hon. President of the society, and among the list of Hon. Vice-Presidents are the names of many eminent members of the profession. Dr. Henry Lewis of Folkestone is the acting President. The inaugural meeting was a most successful gathering, the proceedings being marked by an entire

absence of that mistrust and jealousy which have been said to exist among practitioners of rival health resorts. In the absence of Dr. Ord the opening address was delivered by Dr. Symes Thompson. The Hon. Secretaries of the society are Dr. Septimus Sunderland and Mr. Aylmer A. Macfarlane. A report of the proceedings is given in another column.

A RIGHTEOUS JUDGMENT.

WE are glad to see that justice has at last overtaken one of the many scoundrels who tell lies about the generative faculties. At Marlborough-street, upon Jan. 28th, Henry Walters, trading under the name of Albert Bell at 175, Wardour-street, was fined £20 and six guineas costs for using the titles M.D. and "Doctor" without being a duly qualified medical man. This is wholesome discipline for Henry Walters. He is one of the infamous creatures who make money by distributing filthy pamphlets through the post. He trades upon weak-minded individuals' fear by talking nonsense about spermatorrhœa, and advises the use of a "Self Restorer," which, as his counsel admitted in court, he recommended as curing anything and everything in a month. Henry Walters is liar and a swindler, and we should be heartily glad to see a Bill passed which would render it legal for him and the rest of the "self-abuse" curing (!) crew to be soundly flogged.

INTUSSUSCEPTION IN INFANTS.

THE treatment to be adopted in cases of intussusception occurring in very young children has for some years been much debated. There are those who advocate distension of the bowel by air or liquid, and who consider that laparotomy should never be performed. The upholders of this treatment are now few in number. A second group of surgeons urge that the time spent in inflation and injection is time wasted, that the method itself is often the cause of great danger to the patient, and that it interferes with the success of a subsequent laparotomy. These claim that laparotomy should be performed at the earliest possible moment. In the *New York Medical Record* of Jan. 18th is printed a paper by Dr. Frederick H. Wiggin of New York, read before the New York Academy of Medicine. In this he advocates strongly what may be called "primary laparotomy" for intussusception in infants. He supports his opinion with the records of 103 cases which he has collected. In THE LANCET of last year[1] Mr. E. W. Roughton published an interesting case in support of primary laparotomy and urged many arguments in its favour. But there is yet a third course, and that is the one which we consider to be preferable. If carefully carried out, and if employed within the first forty-eight hours after the commencement of symptoms, inflation and injection are harmless; if they fail, laparotomy may be at once performed without the likelihood of its success having been at all diminished. That distension can effect a cure in many cases of intussusception no one will deny, but it is equally certain that distension, if employed for too long a time or too energetically or at too late a stage, when the intestinal wall has been weakened, may result in the rupture of the bowel and death of the patient. With inflation it is very difficult to estimate the pressure employed, but with injection, if a funnel be used, the pressure exerted by the liquid depends on the height to which the funnel is raised, and it is important to remember that each foot of height is equal to a pressure of half a pound per square inch of bowel wall; the funnel should never be higher than 2 ft., causing a pressure of one pound per square inch. If, also, this method be limited to cases seen within forty-eight hours of the onset of symptoms, and be not applied for more than, say, half an hour, the child will not be injured at all, and the chance of success of the laparotomy which should immediately follow if the injection be unsuccessful will not be in any way impaired. It can hardly be doubted that abdominal section in infants does cause a great amount of shock, sufficient in some cases to lead to death, therefore it is not advisable to have recourse to such a treatment until slighter and safer methods have been given a fair trial.

[1] THE LANCET, Feb. 23rd and March 2nd, 1895.

MEDICAL CERTIFICATES AND THE SCHOOL BOARD.

IT has been arranged to hold a conference on the above subject at 20, Hanover-square, on Thursday, Feb. 6th, at 2.30 o'clock in the afternoon. All who are interested in the subject are invited to attend. We have devoted much time and space to the consideration of this subject, and if the School Board can be brought to see sense and to behave properly it will only be by the thorough organisation of the profession that body has insulted. Hence we hope that the attendance of medical men will be large.

THE NEW PHOTOGRAPHIC DISCOVERY.

THE newly discovered radiations which proceed from the vacuum tube under the influence of the electric discharge are rapidly opening up, as we suggested two or three weeks ago, an entirely new resource in surgery. It is reported from Vienna, for example, that Professor Neusser has obtained photographs showing gall-stones *in situ* and a calculus in the bladder, taken by means of what Professor Roentgen has called the "x" rays. Again, it is stated that it has been decided to utilise the same phenomenon by bringing it into practical use in the hospitals throughout Belgium. We had hardly anticipated the achievement of such important results in medical science so soon, and it is to be hoped that English investigators will not be behind their co-workers abroad in the similar practical application of this most remarkable discovery.

CORTICAL REPRESENTATION OF THE MOVEMENTS OF THE VOCAL CORDS.

IN the *Proceedings of the Royal Society* an abstract of a paper by Dr. Risien Russell appears, which is of peculiar interest, as it gives new information as to the cortical representation of the movements of the vocal cords. Hitherto an adductor centre only has been supposed to exist, but Dr. Russell's researches make it evident that other movements also are represented in the cortex. It was found that both in the dog and also in the cat there existed a focus, excitation of which resulted in adduction of the cords, and near it another, excitation of which resulted in abduction of the cords. The movements in the cat were quite easy to differentiate. In the dog, however, it was only after the adductor fibres in the recurrent laryngeal nerve had been cut that abduction could be produced. Sometimes, however, it was not necessary to do this, as it was found possible to evoke the movement without it. Another effect also was found to be produced in the cords—viz., what is called acceleration of their movements—which it was found difficult to differentiate from abduction. It was further found that in the anterior composite gyrus below the abductor centre a focus existed, excitation of which caused the cords to be first brought into a position of moderate adduction, to which were superadded rapid, short, to-and-fro excursions. Further, it was found that in the peripheral part of the area marked out by Spencer as related to arrest of respiration three foci existed, the most anterior of which was responsible for arrest of the cords in adduction—i.e., in the expiratory stage of their excursions. Excitation of the area behind

this caused arrest in abduction—their inspiratory position; and stimulation of the most posterior focus caused intensification combined with acceleration of the movements of the cords when stimulated. Many other little points are dealt with in this paper, but the main results are those given above, and it will be seen that they constitute an important addition to the facts of cerebral localisation. Dr. Russell is to be congratulated on the fact that the centre for the vocal cord movements has now been differentiated by him in a manner similar to that in which he has differentiated that for the ocular movements.

ANALYSTS' CERTIFICATES: AN IMPORTANT DECISION.

PUBLIC analysts would do well to note an important decision given in the High Courts on Monday last. It appears that proceedings were taken some time ago against a vendor of milk in view of the report of the analyst that the milk contained "5 per cent. of added water." The analyst did not think it was necessary to say more, whereas it was urged in defence that the prosecution must fail inasmuch as the certificate did not furnish any particulars as to the component parts of the milk. That being so, the statement of the analyst that the milk contained 5 per cent. of added water was only an expression of opinion and precluded others from interpreting for themselves the results of the analysis upon which such an opinion was based. The magistrate dismissed the case, and his decision was upheld by the higher court. Mr. Justices Hawkins and Kennedy thought that as it was admitted that milk naturally contained water it was necessary that the magistrate should know what standard the analyst took. It would be wrong, they considered, to convict on a mere statement that there was 5 per cent. of added water. The analysis should be clear and should afford materials on which the justices and the accused also might know how the results had been arrived at. We are under the impression that some public analysts hold the view that figures are better excluded from a certificate as likely to confuse rather than clear the issues. According, however, to this recent ruling such a certificate would not conform to the requirements of the Act.

THE VENTILATION OF INDIAN FACTORIES.

THE processes of spinning and weaving can only be carried on satisfactorily in a moist, steamy atmosphere, and in India, where the air is usually very dry, the unrestricted ventilation of textile factories becomes for this reason almost impracticable. The requisite moistening of the atmosphere in such factories has hitherto been obtained by watering the floor, all doors and windows being closed in order to exclude the dry external air. Of course, the health of the workpeople suffers under such conditions, but according to the *Times of India* of Dec. 26th, 1895, a remedy seems now to be available, for a remarkable experiment in liberal ventilation with moistened air has been carried out at a large cotton mill in the interior of the country. The air-supply was furnished by a fan worked by a steam-engine, and was delivered at the rate of 1,100,000 cubic feet per hour. Four hygrometric observations, made at intervals of several hours, showed that the dampness of the air issuing from the distribution-pipes in the weaving-room varied from 85 per cent. of saturation as a maximum to 69 per cent. of saturation as a minimum, corresponding to an increase of the humidity of the external air by an amount varying from 23 per cent. at 7.15 A.M. to 37 per cent. at 2.45 P.M. The designs and specifications of this ventilating and moistening apparatus were furnished by Mr. John Wallace, C.E., of Bombay, editor of the *Indian Textile Journal*, who has also devised an automatic means of regulating the amount of humidity imparted to the air. This is the first successful attempt to moisten large volumes of dry air up to the requirements of a cotton factory in India, and, as already indicated, the principle employed is the propulsion or "plenum" system, which was described and commended by THE LANCET Special Sanitary Commission on the Ventilation of Hospitals and the Treatment of Infected Air.[1] The unwholesomeness of cotton factories in India was referred to in our columns on a former occasion,[2] and all sanitarians will welcome an innovation fraught with so much benefit for the workers.

LOGIC AND LIGHTS.

EVERY now and then we come across paragraphs in newspapers headed, "Reading in Bed." Then follows a horrifying account about some one being found dead, with the bedclothes smouldering and the room full of smoke, and the paragraph writer then proceeds to dilate upon the danger of reading in bed. His logic is hopelessly at fault. Set out syllogistically it is as follows: "Some artificial lights will set fire to a bed. Those who read in bed use artificial lights. Those who read in bed will set the bed on fire." This argument, involving what is known as the undistributed middle, violates the fourth canon of the syllogism. The last case of this kind which has come to hand is that of a woman who read in bed holding a candle in her hand. Presumably she dropped asleep and the bed caught fire, with the result that she was suffocated. This was only to be expected; but if people would only make it a rule to have some sort of light at some distance away from the bed by means of which they can read or work while in bed we should hear of no more of these accidents. A candle or lamp on a table, given that the candlestick and table or lamp and table are heavy enough not to be upset easily, is safe. A gas-bracket on the wall, or, better than all, an electric light, is again safe. Little portable accumulators can easily be obtained and give quite enough light to read by. The lamp is detachable and absolutely safe. Reading in bed is with certain obvious precautions no more dangerous than reading anywhere else.

A DANGEROUS VERMIN-KILLER.

WE are constantly reminded that however unexceptionable a principle may be it has to be interpreted by its applications. An inquest was held in Silvertown last Tuesday which affords a striking confirmation of this very practical truth. The subject of inquiry was a little girl who had died suddenly, with all the signs of irritant poisoning, after eating a piece of cake. Several other children had shared the mischievous dainty and had subsequently become ill with similar symptoms. It proved on examination that the cake was abundantly poisonous, and had been placed in what was supposed to be a safe place as a bait for mice. No more natural conclusion could have been reached by examination of these facts than that arrived at by the presiding coroner, that the truest precaution to be adopted with regard to this poisonous cake was to abandon its use. How it came about that a virulent poison should ever have been sold in a form, not only rendering its detection impossible, but making it positively attractive to any child who might meet with it, we can hardly imagine. Perhaps no other form would equally attract mice, but this is by no means clear. None at all events could have been devised that would more surely conduce to such an accident as that which actually occurred. The custom of poisoning household vermin is, for one important reason, not the best mode of destroying them, this method being accountable for their death and subsequent putrescence beneath the floors or wainscoting

[1] THE LANCET, May 11th, 1895, p. 1203.
[2] THE LANCET, Dec. 1st, 1894, p. 1295.

of living rooms. The baited trap and the domestic cat are means at once effectual and cleanly, and are thus to be preferred on sanitary grounds. The sad incident above recorded may serve as a reminder to local authorities everywhere that poisons when used must not be permitted in such a form as to disguise their real character from children or others into whose hands they may fall.

THE DEGREE OF MASTER IN SURGERY AT CAMBRIDGE UNIVERSITY.

THE standard for this degree, which has now been established for some years, has been very high, the course of study required very long, and the examination, which includes extemporary essays on surgical subjects, is very difficult, consequently few candidates have aspired to it, and fewer still have attained it. In this respect, therefore, it can scarcely be said to have proved a success. It is not sought as a qualification to practise, for those only are candidates who have passed the examinations and taken the degrees of Bachelor of Medicine and Bachelor of Surgery, but as an honorary degree only; and students who have gone through the processes and examinations requisite for M.B. and B.C. are reluctant, or have not the time, to enter upon the path which leads to M.C. It is proposed, therefore, to open another, an *alternative*, avenue to this degree, which, without requiring further examination than those already passed for B.C., will test the qualification of the candidate in another way—viz., in the main, by the estimate formed by a duly appointed committee of the printed or written contributions to the science and art of surgery which may be submitted to them. The proposal, which is based upon a plan for granting the Doctorate in Science and Letters in the University, which has been found to work well, was favourably received in a discussion on the subject in the Senate on Jan. 23rd; and Sir George Humphry, the Professor of Surgery, said he was glad that it had been so received, for the degree of Master in Surgery was one of the highest honours that was obtainable in surgery in the United Kingdom, and there was no fear of its being lowered by the regulation proposed. He hoped that in future it would be more frequently sought, it being a matter of regret that so few of the graduates of the University were candidates for this degree.

METASTATIC CEREBELLAR TUMOUR.

IN the *Boston Medical and Surgical Journal* Dr. Garceau publishes the case of a patient, a woman forty-nine years of age, who had had two years before she came under Dr. Garceau's observation a carcinomatous tumour removed from her right breast. The tumour was as big as a small apple, and the axillary glands had been slightly involved, and also removed. It is said that her vision began to be affected shortly after the operation, but her general health remained good until she suddenly began to suffer from agonising pain in the upper occipital region radiating into each eye. The pain was constant, and she could only experience relative relief by lying on the left side with the knees flexed and remaining perfectly still, as the least movement intensified the pain. Vertigo and vomiting accompanied the pain. There was no evidence of recurrence at the original seat of tumour in the breast. The pupils were equal; hearing was normal, and questions were answered intelligently and coherently, but slowly and with effort. There was marked somnolence; vision varied, being good on some days and apparently entirely absent on others, and there was found to be a marked condition of "choked disc." When she became very weak the patient had a sensation as though she were sinking into an abyss. It was concluded that a tumour was present in the cerebellum, but the patient declined operation. She lived nine weeks after the onset of the occipital pain. The vomiting was controlled by cocaine, and doses of morphia had to be given for relief of the pain. On the day before she died she had two severe convulsions affecting the right arm, leg, and face, and another fit on the day on which she died. At the necropsy a carcinomatous growth was found occupying the outer part of the right half of the cerebellum. This was held loosely in position by disintegrated cerebellar matter, and among this there were several small nodules, evidently similar in structure to the larger growth. In the cerebrum, also, two tumours were found, one posteriorly just over the cerebellar growth and one occupying the Rolandic region of the left hemisphere. The latter, no doubt, was the cause of the convulsions which occurred just before death.

THE QUESTION OF THE COMMUNION CUP.

WE have referred to the matter of the possibility of infection from the use of a common chalice upon more than one occasion. The danger is so slight and the controversy so likely to give pain to many people that we think the matter might well be allowed to drop. However, others think differently, and we learn through a Nonconformist print that a most complicated form of chalice has been "invented" in America. We do not propose to go into details upon the construction of the chalice. Suffice it is say that the use of such an "ornament" might well cause cavillers of the Prynne type to exclaim "Hocus-pocus" with some justification. It appears to us that there are two simple ways of avoiding any danger of infection from the chalice; the one is the Roman Catholic plan of communion in one kind only, and the other the primitive method of communion by "intinction"—i.e., the dipping of the bread or wafer into the wine and the administering it to the communicant direct from the fingers of the priest. This method, which was fairly general in the West during the twelfth century, we believe still exists in some of the Eastern churches, though more generally a spoon is used, which is open to the same objections as the common chalice. Dignity, a meaning ritual, and reverence should be the notes of a true religious service, and the use of so elaborate a chalice as the one in question is calculated to give great offence and to bring about far greater evils than the one it is intended to cure.

EXTORTIONATE CHARGES FOR REFRESHMENTS.

MOST of us who have paid any attention to the subject must at some time or other have had occasion to note the extraordinary price which may be attached to even the simplest form of refreshment. It appears as if demand were in this market not only the stimulus of supply, but sometimes also the signal for extortion. More than one traveller has of late discussed this question in the daily press, and we cannot but sympathise with their very natural and just objection to be fleeced in a bargain which allows of no comparison in values. Sixpenny glasses of the most ordinary mineral water, sixpenny teacupfulls of quite ordinary tea—probably we have not reached the outer limit of cost—bread, butter, and the like sold at twice the usual rate or more—these are not the conditions of a trade intended for a future of public service. They are still met with, nevertheless, and if little favoured by practical persons acquainted with the value of money, receive at the hands of their more negligent fellows a degree of indulgence which is at least astonishing. Considerations of fair exchange are never trivial. The purchaser, no matter what may be the dimensions of his pocket, owes to himself a due regard for these. The salesman must sooner or later, in defence of his custom, acknowledge a like necessity. Such considerations also, when taken in connexion with the sale of non-intoxicant beverages, have a great deal to do with wholesome habits

of life. It is therefore to be hoped as much in the interest of healthy digestion as of the refreshment purveyors that the prohibitory tariff still occasionally adhered to by the public caterer will before long be regulated by a truer ideal of relative values.

THE Council of the Medical Society of London has adopted the report of the committee, and has awarded the Fothergillian Prize for 1896 to Professor Victor Horsley, F.R.S., "in recognition of the value of his series of papers and demonstrations on the use of the Thyroid Gland and its Special Application in the Treatment of Myxœdema." The presentation of the medal will be made by the President of the society, Sir James Crichton Browne, at the anniversary dinner at the Whitehall Rooms on Saturday, March 7th; and Professor Horsley will give an address on "The Physiology and Pathology of the Thyroid Gland" at the meeting of the society on Monday, March 9th, at 8.30 P.M. As we have already announced, the Lettsomian Lectures for the present session will be delivered by Mr. W. Watson Cheyne, F.R.C.S. Eng., F.R.S., on Mondays, Feb. 3rd and 17th, and March 2nd, at 8.30 P.M., at 11, Chandos-street, W. The general subject of the lectures is—The Objects and Limits of Operations for Cancer.

IT is announced that a special discussion will be held at the rooms of the Royal Medical and Chirurgical Society, 20, Hanover-square, on Tuesday evening, Feb. 11th, on the "Parasite of Malaria." The discussion will be introduced by a paper by Dr. George Thin and Dr. R. J. Marshall, illustrated by microscopical drawings of the parasite and by diagrams. In view of the excellent work already done by those who have studied the disease in Spain and Italy, and on the west and east coasts of Africa, such a subject cannot fail to provoke discussion that should bring to light facts of the greatest interest, whether from a clinical or pathological standpoint.

MR. GEORGE NEWMAN, M.D., D.P.H. Camb., Gunning Scholar in Public Health (University of Edinburgh) and Prizeman of the National Leprosy Committee for report on the History and Causes of Decline of Endemic Leprosy in Britain, has been appointed by the council to be Demonstrator of Bacteriology in King's College, London.

WE are glad to learn that after much delay and protracted negotiations the alteration in the buildings of the General Medical Council is proceeding very satisfactorily. The buildings will be completed in accordance with the original plans and in time, it is hoped and believed, for the next meeting.

A PETITION exclusively signed by women of Cardiff has been sent to the Home Secretary recommending the appointment of a woman when the time arrives for the selection of a successor to the present prison surgeon, who has resigned.

BY the death of His Highness the Maharaja of Bhownugger the Indian Empire has lost her best-known native administrator, his enlightened and energetic rule earning for his State the title of the model native State.

HARROGATE ROYAL BATH HOSPITAL. — The annual meeting of the governors of the Harrogate Royal Bath Hospital and Rawson Convalescent Home was held at the institution on Jan. 23rd, the Earl of Harewood presiding. The report showed that during 1895 there were 870 patients admitted to the hospital and 230 admitted to the home, making a total of 1100, as compared with 1033 in the previous year.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER V.

The Cato-street Conspiracy.—The Execution of the Ringleaders.—A Wicked Accusation.—A Threatening Letter.—The Origin of the Outrage in Argyll-street.—Tom Parker and the Execution of Thistlewood and his followers.

ON the evening of Feb. 23rd, 1820, there were arrested in a loft in Cato-street, Edgware-road, certain members of a desperate band who had leagued themselves together to assassinate the King's Ministers. Cato-street is now named Horace-street and is the second turning on the right in John-street West from the Edgware-road. It starts with an archway under an old public house and is a blind alley. The real origin of the plot and the real purpose of the conspirators were never made very clear. Want counted for something, for not a penny was found upon any of those arrested. A form of general discontent, euphoniously termed "political," that bitter, vague disaffection, bred of bad circumstances and nurtured by inflammatory speeches, counted for more. As far as Thistlewood, the leader of the gang, went, vanity counted for most.

King George III. died on Jan. 29th, 1820, and was succeeded by a son who, whatever his claims to good breeding and his evidences of good nature, could not be called a good man or be expected to make a good king. The death of the aged monarch was a signal to the conspirators to strike their blow. Doubtless they hoped that the inevitable muddle in public affairs consequent upon the devolution of the crown upon the Regent would assist in the wide-spread panic that they intended to create by the assassination of certain of the virtual rulers of the country, and this hope determined the date of their *coup*. They had long been making their preparations; muskets, pistols, cutlasses, and pikes had been secreted in a loft over a range of stables and coach-houses in Cato-street. Here, on the evening of Feb. 23rd, 1820, they assembled to the number of thirty, with the deliberate intention of making a murderous attack upon certain members of the Cabinet who were engaged to dine with Lord Harrowby, the Lord Privy Seal, in Grosvenor-square. The members of the Cabinet who were Lord Harrowby's proposed guests that night were: Lord Liverpool, the Premier; Lord Eldon, the Lord Chancellor; Lord Castlereagh, the Secretary of State for Foreign Affairs, and Mr. Vansittart, Lord Sidmouth, Sir Robert Peel, and George Canning; but of these it was Lord Castlereagh whose life was especially aimed at. Thirty conspirators in a vile cause and in desperately poor circumstances could hardly be expected to keep good faith with each other, and the scheme was revealed to the Bow-street authorities. A raid was made on the loft at the hour of rendezvous, and the misguided wretches were caught in the act of arming themselves. After a furious *melée*, in which one Bow-street officer was shot dead, certain of the ringleaders were captured. Arthur Thistlewood, a commissioned officer in the militia and the only man of education who was involved in the plot—he is said to have served his time as an apothecary—escaped, but the price of £1000 was put on his head and he was captured the next day.

At the trial a man named Monument, a shoemaker, turned King's evidence with the result that Thistlewood, Davidson, a negro whose seditious speeches had counted every whit as

[1] Chapters I., II., III., and IV. were published in THE LANCET of Jan. 4th, 11th, 18th, and 25th respectively.

much in the organisation of the plot as the former's social position and superior learning, Ings a butcher, Tidd a shoemaker, and a man named Brunt were condemned to be hanged, drawn, and quartered, while five of their colleagues were sentenced to penal servitude for life. The condemned men were publicly executed at Newgate in the presence of an enormous crowd on May Day, 1820. The bodies were allowed to hang for half-an-hour, when they were taken down and in formal accordance with the words of the sentence a masked man stepped on to the scaffold and decapitated them, handing each severed head to an assistant who held it up and proclaimed it to the crowd by the name of the late owner. The performer of this unsavoury task was clothed in a rough seaman's guernsey, but so deftly and speedily did he perform the decapitations that he roused in the minds of those who saw him a suspicion that he was a member of the medical profession. The crowd deeply resented the mutilation of the dead, all the more that the political glamour which had been thrown over their crime hid its foolish ugliness, and they yelled execrations mingled with groans and hisses at the man in the mask; and the feeling of disgust thus crudely expressed by the mob was echoed by many more responsible people, and was centred upon the unknown operator. It is easy, therefore, to imagine that to be under suspicion of having served his country in so bestial and degrading a fashion would be a terrible position for a young surgeon. And this is what happened to Thomas Wakley.

How did the suspicion arise? Who started it? Had it any causal connexion with the terrible events in Argyll-street on the night of Aug. 26th? These questions cannot be answered with any certainty, but the facts which guided Thomas Wakley and his legal advisers to their several opinions can be given. The belief that the decapitation of the conspirators had been undertaken by Wakley, wherever it first originated, obtained such support as it received on account of a newspaper article which stated that the masked operator was "a young surgeon of Argyll-street," he being the only surgeon occupying a house in that small street at the time. It was found impossible to trace the originator of the phrase, which appears to have been printed without any personal feeling or any appreciation that it was tantamount to giving a name to the masked man whose anonymity was so much a subject of debate. It may have been written with accidental infelicity or it may have been inspired by malice, and if the latter was the case, the malice may have had a particularly mischievous and successful outcome. For the Cato-street conspirators were thirty in number; and as but ten of them suffered for their crimes, many must have been free, and some of the remaining desperadoes may have planned the murderous and ruinous attack upon the man whom they believed upon public hearsay to have assisted the law in its last horrid offices upon Arthur Thistlewood and his co-conspirators. All this is purposely couched in the language of pure supposition, for no light has ever been thrown upon the real origin of the fire. To complicate matters in the search for an incendiary, Wakley had received, both before and after his marriage, anonymous letters, obviously inspired by jealousy. One of these letters, which was received in March, 1820, contained a distinct threat that his house should be burned down and himself murdered. In consequence of this threatening letter Wakley consulted his solicitors as to the advisability of increasing his insurance. The contents of the house had been originally insured for £600, but the policy dated from before his marriage. After his marriage many things were obtained—furniture, plate, china, &c., while the dresses and jewellery of Mrs. Wakley and her numerous wedding presents had also to be added to his effects. In fact, he found himself, with a distinct threat that his house would be burned down, in the unpleasant position of being secured against loss to the extent of one half or perhaps a third of the value of his goods. His solicitors urged him to insure his effects to their proper amount and also to put the letter out of his mind; but the first he delayed to do and the second he was unable to do. At last he insured for a further sum of £600, and this increase of insurance was made so short a time before the fire, with all its extraordinary circumstances, that it is hardly to be wondered at that at the first moment the insurance company withheld payment, not actually alleging that the luckless owner of the house had burnt himself out, but leaving the impression by their action that such was their belief. The complete refutation of this comical insinuation on the part of the Hope Fire Assurance Company—for it was comical as well as terrible, inasmuch as it was proved to the hilt and apparent to the casual glance that the money owing by the company did not more than half indemnify Wakley for his losses in goods and otherwise by the fire—followed, as will be seen, almost immediately; but during the time necessary to prepare the proper legal procedure for his vindication he suffered mentally under the belief that the cruel and baseless suspicion was widespread.

But the actual culprits were never discovered. Did one of the Thistlewood gang set fire to No. 5, Argyll-street and attempt the murder of the owner? Did the writer of the anonymous letter, to whose identity no clue was ever obtained, but who had made categorical threats to do these two things, carry out his threats? These persons could not be one and the same person, as the anonymous letter preceded the Thistlewood executions by two months. Wakley's lawyers seem rather to have leant to the theory that the assault and arson were the execution of the threat. Wakley himself implicitly believed that he had been attacked by some of Thistlewood's gang or by persons at any rate who sympathised with Thistlewood to this extent, that they were prepared to take vengeance upon the man whom they were informed had played the part of amateur headsman upon his person. It required a man mad with jealousy to write the anonymous letters, and it only required him to be a little madder to carry out the threats contained in them. So far the lawyers' view is tenable. But, as will be seen, Wakley was robbed as well as assaulted, and though jealousy might have dictated the burning of the house and the savage attacks upon the owner they would not have instigated an unsuccessful rival to the meaner felony. That members of the Thistlewood gang were concerned in the matter must have seemed at the date probable, for men's minds were then full of the daring and vile enormity that these ruffians had planned to perpetrate, and no act would have seemed too stupid, causeless, and criminal to be attributed with reason to the residue of the band. It is, of course, possible that Wakley was right in his view. But in the beginning we are confronted with a coincidence that asks for much credibility if any of the Thistlewood gang are to be held responsible for the Argyll-street outrage. We must believe that the exact threats made by one person in February for one reason were carried out by different persons in August and for a different reason. Or we must believe that the jealous man seized the opportunity of the known though unreasonable fury of the coarsest socialistic party against Wakley to instigate some disciples of Thistlewood to the crimes. It is not very probable that any miscreant, however enthusiastic a follower of Thistlewood, or however nearly tied by blood or sentiment to any of that man's misguided followers, would, soon after the breaking up of the Cato-street gang, have dared to outrage the law in so public and flagrant a manner. Those of the actual band

who were still at large had prices put upon their heads for high treason, and an example before their eyes warning them that capture meant subjection to the utmost rigour of the law. Their relatives and friends would for the same reasons be chary of drawing upon themselves the attention of the authorities. The supposition that the outrages were the result of an ordinary robbery with violence planned against a man known to be recently married and in possession of much portable property is the one that demands the least exercise of imagination, but does not fit in with the circumstances as will be seen.

Such are the theories as to the cause of the Argyll-street outrages which broke up Thomas Wakley's home, injured his health, and ruined his practice, reducing him in a few moments from a position that had been truly enviable to one that was as truly deplorable. The grave effect that the sudden and terrible check to his material prosperity and domestic happiness had upon him at the time and afterwards—it possibly determined his career, and certainly influenced his life—warrants the lengthy treatment of the whole episode, and the sworn testimony to the events of this night, supplied by several eye-witnesses, will be given in the next chapter. The reader will then be in the position to judge for himself where the balance of probability lies, and see at the same time how monstrous as well as foolish were the slanders that attributed the burning of the house to his own hand, and the anonymous messages and murderous attack to his own imagination.

But if the murderous robbers and incendiaries were never detected, the identity of the man in the mask who assisted at the execution of Thistlewood and his followers, and for whose revolting deed Wakley suffered, is now fairly established. He was in all probability a certain Tom Parker, at the date of the executions an assistant to Edward Grainger in the Webb-street anatomy school, and later dissecting-room porter at St. Thomas's Hospital, under Richard Grainger. It seems idle, almost, to repudiate for Thomas Wakley any share in the matter, but inasmuch as he himself took pains to refute the revolting and ridiculous calumny, and inasmuch as there were certainly persons at the time who believed it and others who spread it abroad, whether they believed it or no, it is best to put on record the following correspondence, which had the effect of silencing the slander entirely :—

1. *Letter from Thomas Wakley to J. W. Parkins, Esq., Sheriff of London and Middlesex.*

Kentish-town, Sept. 21st, 1820.

SIR,—From the period of my late catastrophe in Argyle-street, to add to my anxiety, I have been currently charged by a multitude of malignant slanderers as being the person who decapitated Thistlewood and his deluded companions in May last. Your official contradiction of this disgusting falsehood, as Sheriff of London, will confer a lasting favor on, Sir, Your obliged servant,

(Signed) THOMAS WAKLEY.

J. W. Parkins, Esq.,
Sheriff of London and Middlesex.

2. *Letter from Mr. Parkins to Thomas Wakley.*

No. 10, New Bridge-street, Sept. 25th, 1820.

SIR,—In answer to your letter of the 21st instant I feel myself bound to comply with its contents to the utmost of my power; but I am sorry to inform you that the whole of the disgusting business to which it relates was conducted with so much privacy and pertinacious concealment from me that I was not even made acquainted with the order for the execution until the day after (Sunday when I went to Newgate accompanied by a clergyman) it had been determined upon, and orders given for erecting the scaffold, &c., by the Lord Mayor, Bridges, and my colleague, Mr. Rothwell, who, accompanied by his deputy, had, I understood, been at the Secretary of State's office arranging the same. As to the man who decapitated the unfortunate Thistlewood and his companions, he was procured for that purpose by the prison surgeon, and his terms £20 agreed for by Mr. Turner, Mr. Rothwell's deputy, and which wages Mr. Turner told me were repaid to him by the Home Department, as also £5 he paid to the man who held up the heads.

I did not see the man who performed the duty until he appeared on the scaffold masked, and dressed as a sailor. By the notice I then took of him (which was very particular) I perceived him to be in height about five feet five or six inches; and in answer to my inquiry the other day (in consequence of your note) who the fellow was, Mr. Turner informed me that he was a resurrection man who obtained bodies for the hospitals, and that when he asked him if he could perform the task of cutting off the heads, he replied, oh, yes, that he could do it very well, as he was in the habit of cutting off *nobs* (heads) for the purpose of obtaining *nackers* (teeth). I am glad for the honour of our country's humanity that it was no person of respectability, but a most illiterate and degraded being, as was also the wretched individual who held up the heads of the unfortunate men.

In addition to the above, I am credibly informed that the individual who decapitated Thistlewood and his companions was engaged by the under sheriffs from Yorkshire to go there for a similar purpose, but in the performance of which sanguinary work, thank providence, he has been disappointed.

I cannot conclude this letter without bearing testimony to the humane disposition of your heart towards the depraved young man who robbed you of your watch on the fatal night when crossing the road, and bleeding from the wounds inflicted by the assassins and incendiaries who had set fire to your house in Argyll-street.[2]

I hope this assurance will convince everyone, even the most malignant of your enemies, that it was totally impossible anyone could mistake a gentleman of your appearance and height (which I conceive to be about five feet ten inches) for the person (five feet five or six inches) who performed the sanguinary duty on Thistlewood and the others in May last.—I am, Sir, your most obedient servant,

Thomas Wakley, Esq. J. W. PARKINS, Sheriff.

3. *Further Letter from Mr. Parkins to Thomas Wakley.*

November, 1820.

SIR,—I hope you have not been liable to any further annoyance from the erroneous and wicked opinion which prevailed that you were the person who decapitated Thistlewood and his associates. I am inclined to think that my letter of the 25th of September has been of service to remove that impression, as a few days ago a stout woman called upon me and asked if the letter which you published was one from me, and on being informed that it was so she expressed her surprise, and said that if the man who did it could be found he would be served out or made away with. It did not occur to my recollection at the time or I would have endeavoured to trace out who those were who set your house on fire. I cannot conclude without noticing the cool indifference of Mr. Box, who could scarcely be induced to tell me who the man was that he hired for the purpose, Mr. B. stating as a reason that if the police officers knew him they would take him into custody for robbing the churchyards, and Mr. Deputy-Sheriff Turner said that it was not necessary to be more particular than merely to state on my authority that you were not the person. However, I now feel much satisfied that I gave you the letter that I did. With best wishes for your prosperity, believe me,

Yours truly,
J. W. PARKINS, Ex-Sheriff.

To Mr. T. Wakely, Surgeon, Albemarle-street.

From these letters of the worthy sheriff it is clear that the Home Office employed a dissecting-room porter and a resurrectionist to assist in carrying out the sentence upon the Thistlewood gang. Mr. William Adams, F.R.C.S., has kindly supplied information which, taken in conjunction with that afforded by the cordial replies of Mr. Parkins to Wakley's letter of Sept. 1st, 1820, confirms the rumour, prevalent at the time, that the Government's *aide-de-camp* on the gruesome occasion was "Tom Parker of Grainger's." Mr. Adams informs us that suspicion fell not only upon Wakley but upon his late instructor in anatomy, Edward Grainger, who was compelled to make a public denial.

"The man," Mr. Adams writes, "who really did cut off the heads I have no doubt was a man well known as 'Tom

[2] The episode to which Sheriff Parkins refers will be found in the next chapter.

Parker,' Grainger's head dissecting-room porter. This man was a celebrated 'resurrectionist.' He told me he once took fourteen bodies out of Old St. Pancras churchyard in the night.

"That he possessed the requisite skill is proved by what I myself saw. In the year 1842 I was appointed Curator of the Museum and Demonstrator of Morbid Anatomy at St. Thomas's Hospital, and in that year we bought Grainger's School, appointed Grainger lecturer in physiology, and made other important changes. With Grainger we took several other well-known characters of the old school, and Tom Parker became my chief dead-house assistant. In 1843 I found that the museum was very short of separated bones of the skull, and I asked Tom to look out for any favourable opportunities. A young woman about eighteen years of age threw herself over Waterloo-bridge and died at the hospital. Tom said her head was just the thing I wanted, and, when we were alone after the post mortem, he said: 'Now I should like to show you the secret of cutting off a head.' The knife, he said, would never do it, but there was a dodge in wrenching through the ligaments by twisting the head violently first to the right and then to the left after all the soft parts had been cut through. This he demonstrated on the spot by putting the girl on the floor, then raising the trunk and firmly grasping it between his knees, when he made the cut in front, sloping the knife towards the occipital articulation, and then the cut behind with the same slope of the knife. Then the violent wrench and the head came off. Tom was generally accused of being the man on the scaffold, and never denied it, but he never confessed it even to myself, next to Grainger his best friend.

"The sequel to Tom Parker's case of decapitation was remarkable. The coroner's jury returned a verdict of *felo-de-se*, and the woman was buried in unconsecrated ground close to the churchyard of St. Thomas's Hospital. The beadle of the parish and a few others were at the grave, and the beadle said his duty was to see that the body was in the coffin. This, of course, Tom Parker resisted, and a few others that were at the grave; but the beadle got his pickaxe and forced open the coffin, when it was found that there was no head. Then the people adjourned to the public-house close by and Tom ran off to the hospital, put the head in his pocket-handkerchief, and went back to the grave and put the head on with a little sawdust over the neck. Tom Parker then went down to the public-house and faced the mob. Tom made a speech and said: 'Now this 'eer beadle says the woman was brought from St. Thomas's Hospital without her head. Now I mean to say that the beadle is drunk, and I insist that all the people here come to the grave and see for themselves.' Away the crowd went, and the woman, sure enough, had a head on, and he turned the tables upon the beadle."

It is not really of much consequence who was the actual assistant at the Thistlewood executions, for Thomas Wakley was never accused of being the culprit after the appearance of Sheriff Parkins's first letter; but, as a matter of historical probability, the exploit rests with Tom Parker. It had evidently got abroad somehow that Grainger's School were represented on the scaffold, some gossip from the dissecting-room having oozed out. Grainger himself was accused, and Wakley, an enthusiastic student, as we have already seen, of the Webb-street school, shared the same ill-fortune. Government probably applied to Edward Grainger for assistance in a practical difficulty, and he got them out of it by nominating his dissecting-room porter. Is it a very wild fancy to imagine Tom Parker first waxing wise and important when rumour was busy with the name of the masked man, and allowing that an he would he could a tale unfold, and then shirking the confession he half desired to make, and thrusting what would have seemed a great deal like fame in his eyes upon his employers?

(To be continued.)

FOOTBALL CASUALTY.—During a match on Saturday last, at Tufnell-park, between the London Welsh and Crouch End teams, a player fractured one of his ribs.

THE SOCIAL EVIL AND THE PROPAGATION OF VENEREAL DISEASES.

TWELVE years have elapsed since the Acts known as the Contagious Diseases Acts were practically suspended by a resolution of the House of Commons in February, 1883, and a decade has nearly passed since these Acts were wholly repealed in 1885. A sufficient interval has, therefore, occurred to enable us to take a perfectly dispassionate view of the various questions involved in the passing and in the repeal of these Acts. In other words, we can study the "social evil," especially in its worst phase, that of propagating syphilis, by the light of the past and of the present. Possibly, also, we may gain some insight as to what will be the probable future with regard to legislation on this painfully important subject. It will be desirable here to note that the repeal of the Acts in this country was followed by their repeal in India, in China, and in all those British colonies where they had been enforced, with one notable exception, that of Malta. In that island prostitutes had been for a long time compelled to submit to periodical medical examination, and, though the exact date of this regulation cannot be ascertained, it is known to have been of very long standing, being probably introduced during the early years of the Government of the Knights more than three centuries ago. In 1859 circumstances caused the temporary suspension of the practice, but so serious were the consequences that it was found necessary to pass the Ordinance of 1867, which remains in force to this day, the Maltese Government having rejected the motion for its repeal by a decisive majority. Thus after the experience of several centuries of legislature, and of only two years of the repeal of the Acts, the Government of Malta have decided for the retention of a law which by a wise provision prevents the prostitutes of Malta from spreading disease broadcast among the soldiers and sailors, always to be found there in large numbers, and also to the civil population. It is well known that, though so small an island, Malta is very thickly populated, there being a total of 168,000 persons in that island and in Gozo, the chief town, Valetta, and the "Three Cities" on the other side of the harbour, containing more than one third of this number. It may be easily conceived that under such circumstances venereal diseases, and particularly syphilis, would spread like an epidemic. But a Parliamentary paper gives the following beneficent results of this legislation. In 1884 the Royal Malta Fencible Artillery, with a strength of 324, had no cases of syphilis. The Duke of Cornwall's Light Infantry, with a strength of 900, arrived from England in December, 1885, with 28 cases of venereal disease, while on Nov. 15th, 1886, they had only one case of gonorrhœa in hospital. The Black Watch, with a strength of 740, arrived from Egypt on May 5th, 1886, with 33 cases of venereal disease; six months later there were none of them in hospital. The report of the Deputy Inspector-General of Hospitals and Fleets showed an equally favourable state of the seamen as regards freedom from venereal disease; and Dr. Pisani, the chief Government medical officer, in his report in 1886 (when it was proposed to repeal the Act), gave the following very striking facts: "Venereal disease is not very prevalent here. Bad forms of syphilis are uncommon in comparison to what is the case in other countries and in proportion to this population. This might not be expected, considering that there are here stationed several regiments, and that Malta is a naval station and lies in the route of great sea traffic. I am convinced that this exceptional relative immunity from venereal disease is due to the supervision of prostitutes, which is here enforced by law." There is also stated to be a somewhat similar measure in force in Simon's Town, Cape Colony, but of this we have no details except that it is very successful in preventing the spread of venereal disease and would be still more so were it not for the frequent importation of the disease from Cape Town and other unprotected places. Though the Acts have been repealed in China, in India, and other Crown colonies, it was not done without protest. On the contrary, the proposal was received with much regret by the Governors and other prominent officials, including the local army and navy medical officers as well as the colonial surgeons. The articles and papers which have recently appeared in THE LANCET show the

terrible spread of disease which has been the direct result of the repeal of these Acts in India, Hong Kong, and the Straits Settlements, while the Parliamentary papers already referred to give abundant evidence that this could be amply confirmed, were it necessary, by the reports from Ceylon and elsewhere. In Malta the Council of Government comprises both official and elected members. Of the latter, not one of the thirteen present when the repeal was moved spoke in its favour, knowing as they did what was the general opinion of those whom they represented. The debate was most interesting, and the speeches contrast very favourably with those delivered in our own House of Commons. The lay press of Malta, too, spoke out boldly, as may be judged by these extracts from *Public Opinion* of Nov. 27th, 1888: "As our friends of the palace appear to be anxious to know our opinion as to the proposal made by the Crown Advocate to repeal Ordinance No. IV. of 1861, we have much pleasure in declaring that, in our thinking, the provisions of that Ordinance, far from being repealed, ought to be made more stringent and more efficacious; that the elected members, paid and unpaid, should disregard the orders sent out by the Secretary of State, and unanimously oppose the repeal of that Ordinance. ..... If the great Imperial Government think it right for party purposes to fall in with the mawkish sentimentality of certain parties in England, that is no reason why this island should be converted into a pest-house for the propagation of the foulest and most insidious diseases which undermine the health and the life, not only of the immediate sufferers, but of innocent generations yet unborn. Without entering into unpleasant and disgusting details, we shall only add that the views briefly stated above are those of the most eminent and most conscientious medical and sanitary authorities in Europe." And after the motion for repealing the Acts had been defeated the same paper observed: "No one pretends to interfere with the action taken by the Government and the people of England, who with the view of protecting the dignity and the modesty of fallen women have sacrificed the health and the efficiency of the British army and navy at home and abroad, and facilitated the spread of that most loathsome and most insidious disease to innocent women and children. But it would be most unreasonable, unjust, and despotic to repeal a law which the inhabitants of these islands unanimously uphold as the only safeguard against the spread of that disease—a disease which infects not only those who violate the moral law, but also respectable and honest women and their offspring, who certainly are more deserving of protection than all the unfortunates in the British Empire."

When twelve years ago the suspension of the periodical examinations of the women subject to the Acts then enforced in England and Ireland was carried the *Times* observed that the Acts had received their death-blow. The preceding remarks show that this was at least somewhat premature. Certainly they have not received their death-blow in Malta; on the contrary, their suspension led to their being re-enacted and enforced with as great vigour as before, and with the most beneficial results, not only to the English army and navy, but to the civil population of the island, both English and Maltese. The repeal of the Acts in India, China, and other colonies has been followed by results which have caused much indignation to those who know the full extent of the evil and the totally different position of native women from those in England and Ireland. The following brief history of the introduction of the Acts will show that it is not a mere political question, and also that their repeal was carried in the face of all official experience of their beneficial working. In 1862 a Committee of the House of Commons reported in such serious terms on the extent and severity of venereal disease in the army and navy that the Act of 1864 was passed. In that year a medical committee, known as Mr. Skey's Committee, was appointed by the Admiralty and War Office to consider the subject and to the naval and military authorities any practical rules to diminish the frequency of the cases of contagion, such rules to be capable of adoption in the daily life of the ship or barrack. This committee examined a large number of witnesses, including the most eminent surgeons of that day. Their attention was drawn to the defects of the recently passed Act, and to the superiority of the Maltese Act, which had been in working for several years since its re-enactment. In consequence of this they recommended the periodical examination of all prostitutes within the districts to which the Acts were applied, which formed the principal feature of the Act of 1866. This Act was enlarged and improved by the subsequent Act of 1869, and all this was done with very little opposition. The Lords' Committee of 1868 and the Commons' Committee of 1869 reported very favourably of the Act, each recommending its extension. Then arose the opposition with which we are so familiar, and a motion for the repeal of the Act was moved in the House of Commons in 1870. It was defeated by a large majority, and a Royal Commission was subsequently appointed. It reported favourably of the Acts, only a few members being in favour of their repeal. In 1873, 1875, and 1876 motions for their repeal were each defeated by a large majority, and in 1879 a Committee of the House of Commons was appointed and sat till 1882, when it reported strongly in favour of the Acts. Thus a period of twenty years had passed, embracing the last Government of the late Lord Palmerston and Lord Derby's Government of 1866–68, two Governments of Mr. Gladstone, and one of the late Lord Beaconsfield. All the various inquiries were favourable to the Acts, and each of the Ministers most capable of judging of their working—viz., the Home Secretary, the Secretary for War, and the First Lord of the Admiralty in each Government—spoke and voted in their favour. Even at the debate in 1883, when the Acts were virtually suspended, these three Ministers testified in their favour.

Those who opposed these Acts have, therefore, carried their point and had their own way. What has been the result? Has the "social evil" been diminished either in the towns formerly subjected to these Acts or elsewhere in England and Ireland? On the contrary, there is abundant evidence that their repeal is much regretted by all those inhabitants of the formerly protected places who are capable of forming a dispassionate opinion. Have voluntary efforts been honestly made to supply hospital accommodation for those unfortunate women formerly admitted into and treated in the wards of the Government lock hospitals? On the contrary, the inadequate supply of such hospitals and wards, and the miserable support given to the few which exist, are blots upon our boasted civilisation. As for London and other large towns to which the Acts were never applied, it may be safely asserted that never was the "social evil" more aggressive and more rampant in the streets than it is now, while, as regards venereal, and more especially syphilitic, diseases in all their forms, they still continue to be a national scandal. On this point we can speak without any hesitation. We have condemned in THE LANCET, with all our might, the heresy attributed to members of the medical profession that unchastity may be defended as a venial offence, and that chastity is physiologically bad for young men. We have quoted the words of leading physicians and surgeons—e.g., Sir William Jenner, Sir James Paget, Dr. Gowers, and Dr. Lionel Beale—to the effect that chastity never did harm to mind or body, that such discipline as it involves is excellent, and that marriage can be safely waited for, even for years, without the least danger to health. That some unwise members of the profession may have given different advice is unfortunately true, but these form a very small minority. The larger proportion of medical practitioners know well the truth of George Herbert's saying: "Continence hath its joys"—both negative and positive. Who know better than they what evils incontinence involves—diseases often embittering the whole of a life and not infrequently ending in premature death? A miserable ending, indeed, to the small gratification afforded by incontinence. From such miseries men who curb their passions are exempt.

But we must take human nature as we find it, and we must avoid that confusion of terms which is of itself a peril and a danger into which so many well-meaning persons of both sexes often fall. There are thousands of young men to whom marriage is simply out of the question until they have attained middle life—if, indeed, it can be attained then. There are also thousands of women who can never hope to marry at all. Venereal diseases are not necessarily the consequence of sin *per se*, but of sin with a diseased person. Moreover, for every "frightful example" such as we have indicated every one can call to mind persons who have lived unchaste lives without incurring this penalty. To the worst form of vice—seduction—disease, so far as the man is concerned, cannot occur as a penalty. Nothing can be more unfortunate as well as erroneous than this confusion of vice and disease.

And what ought to be the attitude of members of the

medical profession, of philanthropists, and of humanitarians towards the victims of vice? Are they to be left with their diseases uncured? Such an attitude would be alike inhuman and unchristian. The experiment has, unfortunately, been tried, with the disastrous results which we have seen. If such diseases as scarlet fever, small-pox, typhus fever, &c., were to occur to the inhabitants of the most infamous brothel, would it be argued that the inmates and their frequenters ought to take these consequences of their vice? No, for in this case the medical officer of health would interfere and remove the infected to hospital. But a disease quite as dangerous and even as deadly may be propagated not only amongst the prostitutes and the men given to vice, but amongst innocent wives and children. Does not the almost daily experience of the Divorce Court show that marriage is by no means a perfect safeguard against unchastity, too many persons being married but not mated? In short, the whole subject is one which cannot be treated in a narrow or dogmatic spirit. What is required is that venereal diseases shall, so far as is possible, be prevented. That the much-abused Contagious Diseases Acts did this is beyond all question. They have been actually repealed for ten years, and practically so for twelve years. Meanwhile we have returned to a state of matters quite as bad as, if not worse than, when a Parliamentary Committee reported in 1862: "A mass of vice, filth, and disease," again "surrounds the soldiers' barracks and the seamen's homes"; it "not only crowds our military, our naval," and civil "hospitals with sick, weakens the roll of our effectives, and swells the list of our invalids, but surely, however slowly, saps the vigour of our soldiers and our seamen, sows the seeds of degradation and degeneracy, and causes an amount of suffering difficult to over-estimate."

All this must form the subject of inquiry; it is simply a question of time. Not only is such an inquiry demanded at home, it is also required in India, where it is officially reported that in 1893 practically 50 per cent. of the British Army were in hospital suffering from venereal diseases, the Commander-in-Chief expressing his opinion that the record for 1894 would be found to be worse. In China and the Straits Settlements inquiry would show an equally serious, if not worse, state of things; and if it were extended to other colonies the result would be to confirm the disastrous results of the repeal of the Acts everywhere. Matters would be on a totally different footing now compared with that on which they were before. Then the Acts were new and on their trial. Then their working could only be judged by what took place before their enforcement. Now we have a period of twelve years since their suspension and ten years since their repeal to be added to the comparison. If the result of inquiry be, as it must be, to confirm the opinion of those who have supported these Acts through evil and through good report, no amount of special pleading on the part of their opponents can avail. Moreover, many who were opponents have been converted by the inexorable logic of facts, as witnessed in Chatham, Devonport, Plymouth, Portsmouth, and all the other districts which formerly had the benefits of the influence of the Acts. History will be found to have repeated itself as it did in the island of Malta, and it will be found that special legislation is necessary to control the evils consequent upon unchecked prostitution.

THE ASHANTI EXPEDITION.

THE nation may be fairly congratulated on the success of the Ashanti expedition. The plan of the undertaking has not only been very skilfully designed, but carried out with remarkable precision and with an amount of foresight and attention to detail that have left nothing to be desired. The success of campaigns depends more than most things upon good luck and good guidance, and both have been present on this occasion. The expedition has been lucky as regards the season and the comparative coolness of the weather and the celerity with which it has been executed. The troops were not disembarked until they were actually required, they proceeded at once on their march, reached Kumasi without any fighting, and returned to the coast without loss of time and within the limits of the dry season, which all previous experience has shown to be the healthy one in that climate. The nation has had to mourn the loss of Prince Henry of Battenberg and the burden of a great grief has fallen upon the Queen and the Royal Princess his widow. The death of Major Ferguson, who was a comparatively young and vigorous man, from a very severe attack of African fever, was also an unexpected calamity. Notwithstanding that the heat and the fatigue of the marches have had their effect on the troops, the total number of sick does not at present amount to more than 100, which is most satisfactory. We must expect, however, that this number will be augmented, for it is only too probable that many have contracted malarious disease the manifestations of which will appear later. Those who have already suffered from fever will also be liable to recurrences or relapses. Still, compared with the terrible results of military expeditions in that country before the campaign of 1873–4, the nation may be congratulated on the comparative freedom from disease and the small mortality that has attended the present expedition to Kumasi. The results, too, promise to be very satisfactory. We have relieved a vast population in West Africa, as Mr. Chamberlain has in effect well said, from a bloody and barbarous tyranny, dealt a heavy blow to slave raids, and opened out an important and productive country to possible commerce and civilisation. It now remains for us to devise some just and settled form of government in Ashanti, to open some communication by railway, in the absence of animal transport, between it and the seaboard, and to discover a healthy site in the uplands for the accommodation of the force that will have to form a future garrison there. This being accomplished, we make no doubt that there will be in time a more peaceful, contented, and happy population in Ashanti than has ever before existed there. The arrangements made during the late campaign for the transport, feeding, and accommodation of the troops and those falling sick on the line of march by rest camps and native huts—constructed of bamboo and thatched with palm leaves, and raised two feet above the ground—seem to have been as well carried out as was possible under the circumstances, and due care appears to have been taken with regard to the water-supply. By all accounts the country is densely wooded, some of the forest trees being very large and of great height, and the vegetation, consisting of undergrowth and creepers, redundant. There is also plenty of insect life of various kinds, white ants being of the more destructive and formidable sort. The clearing of a way for the troops along the line of route was a serious undertaking in some places. The march to and from Kumasi has, as we have already said, proved a very trying one, and the force shows signs of its exhausting nature; they are described as looking pale and haggard, this applying even to those who have altogether escaped an attack of fever. We are proud to notice that the work done by the medical service has most deservedly attracted attention, and that the zeal displayed by the Army Medical Staff in their attention to the sick is stated, according to Reuter's Special Service, to deserve the highest praise. The medical officers with the 2nd West Yorkshire Regiment and the Composite Battalion are specially named. Surgeon-Captain Maher with the former was often to be seen carrying the men's kits and rifles and giving up his hammock for their comfort, while Surgeon-Captain W. C. Beevor of the Scots Guards, with the Composite Battalion, was untiring in his efforts to prevent sickness. We may boldly add that this has always been so; that medical officers have on all occasions shown a spirit of self-abnegation and zeal on field service, and that what was noticed in connexion with this expedition was also the case during the trying marches in the Afghan campaigns, in the Egyptian and Nile expeditions, and during the late siege and relief of Chitral.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 25, Grosvenor-street, W., on Jan. 22nd. The minutes of the preceding meeting were read and confirmed.

Mr. Percy Dunn, the honorary secretary, reported that he had received a letter from the honorary secretary of the Society of Members of the College conveying the thanks of the committee of the society to the Fellows of the College as well as

to the Association of Fellows for supporting, by the recent vote at the half-yearly meeting of Fellows on Jan. 2nd, the principle of the direct representation of Members of the College on the Council, and at the same time expressing the hope that the vote in question would mark the commencement of a new era, in which Fellows and Members of the College would work together for the good of the institution. The letter further stated that the committee of the society deemed it desirable to postpone the consideration of the details of representation until after the committee of the Council had reported, and that the general opinion among the Members was that the power to elect one of their own order to the Council should be granted and would be the only satisfactory solution to the controversy. A discussion then followed upon this letter, and eventually it was unanimously agreed that the following resolution should be forwarded to the Society of Members in reply:—

"That the committee of the Association of Fellows of the Royal College of Surgeons of England has the pleasure to acknowledge the resolution of thanks received from the committee of the Society of Members and to state that the feeling of the committee of the Association is generally in favour of the principle of direct representation of the Members of the College on the Council, as was clearly shown by the fact that no less than seven of the members of the committee spoke in favour thereof at the recent meeting of the Fellows. It should, however, be understood that before the committee as a body could take any action in this regard in the name of the Association it would be necessary to receive a direct mandate from the Association generally."

The committee then proceeded to consider the question of the admission of reporters to the half-yearly meetings of Fellows. The matter having been fully discussed the following resolution was unanimously adopted and a copy thereof directed to be forwarded to the President of the College:—

"That, in view of the fact that no reference is made in the regulations of the Council under which the half-yearly meetings of the Fellows are conducted to the admission or exclusion of reporters, the Committee of the Association of Fellows begs leave respectfully to invite the attention of the Council to this important subject, believing it to be in the highest interests of the College that the proceedings at these meetings should be fully reported in the medical journals."

The Hon. Secretary reported that at the general meeting of the association held on Dec. 11th, 1895, Mr. George Pollock, the President, Mr. T. Holmes, Vice-President, and Mr. Percy Dunn, Hon. Secretary, had been unanimously chosen as representatives of the association on the Civil Rights Defence Committee. As it was understood that the committee had power to add to the number of the representatives, it was duly proposed, seconded, and resolved that Mr. Gant's name should be added to the above list of representatives.

This concluded the business of the meeting, and the committee adjourned.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

THE inaugural meeting and conversazione of the British Balneological and Climatological Society was held on Jan. 22nd at Limmer's Hotel, Conduit-street, W.

Dr. HENRY LEWIS (Folkestone), the President, in opening the proceedings thanked the members of the society for electing him as their first president and for the compliment they had thus paid to the fair health resort of Folkestone. He ventured to express the firm conviction that if they were only true to themselves, learning from each other by the personal contact which the society would bring about, the eyes of their understanding would be opened and the area of their knowledge enlarged, so that in the interests of suffering humanity they might be able to demonstrate the great conveniences and advantages of British health resorts. He regretted the unavoidable absence of Dr. Ord (who had promised to deliver the inaugural address), but Dr. Symes Thompson had kindly consented to fill his place.

Dr. SAMUEL HYDE (Buxton), Chairman of Council, made a statement as to the position and prospects of the society, which, he said, was founded on Nov. 9th, 1895. At the general meeting held earlier in the day eighty-eight new members had been added to their ranks, and promises of further sympathy and support justified the most sanguine expectations for the future prosperity of the society. It had long been considered by many that the practitioners of British health resorts were so divided by antipathies and jealousies as to make it impossible to form a society. The results, however, proved this to have been fallacious, and the existence of the society would tend to soften down any cause of disunion. He wished particularly to point out that the rules of the society had been framed on the broadest principles, and absolute control was placed in the hands of present and future members. The rules also provided for a considerable infusion of new blood into the executive every year. It had already been arranged for two or three monthly meetings to be held during the session.

Dr. SYMES THOMPSON, after expressing disappointment and regret for the absence of Dr. Ord, said there could be no question that within the last few years a greatly increased interest had been given to questions of climate and balneology. This had arisen from a variety of causes. One cause was that, with the increasing tendency to congregate in great centres, the new-comers were compelled to seek pastures new in the various climates and baths of our country. The greatly increased facilities of locomotion, too, had largely increased our means and opportunities of utilising the advantages of the various resorts. A meed of credit should also be given to the Meteorological Society, which had reclaimed from an ill-defined to a definite process a subject which previously had shown nothing but vagueness and often imagination, and he trusted that in the near future the scientific precision with which the Meteorological Society made its calculations would be productive of much good. Then, again, the mortality reports issued from time to time enabled them to compare the prevalent diseases of the various resorts, and enabled them to form an opinion as to the advantages and disadvantages of the British health resorts in certain classes of disease. This society would be very useful to the medical profession in obtaining an insight into these benefits and disadvantages. Many places would be reclaimed and restored. The knowledge of the characteristics of our health resorts was not what it should be, and such a society as this would be able to do a great service in making accurate knowledge more widespread. Each member of the society would feel called upon to do his best to make his health resort as attractive and advantageous as possible. Foreign health resorts were far ahead of us in this direction, but there was every reason to hope that the attention drawn by this society would be the means of making health resorts in this country more attractive than at present. If they fully recognised the advantages possessed by our spas they would not need so constantly to go further afield. An important advantage that would accrue from the society was the opportunity it would give to the busy consultant in London of coming in contact with the representatives of the different spas, who would thus be able to hand over to local men patients suffering from chronic illness with the knowledge that attention would be given to those minute details of treatment which was so necessary in these cases.

Dr. EDWARD MACKEY (Brighton), who complained of the lack of baths in his town, which possessed a good climate, proposed a vote of thanks to Dr. Symes Thompson.

Mr. SHIRLEY JONES (Droitwich) seconded the vote of thanks, which was heartily accorded.

Dr. A. S. MYRTLE (Harrogate) proposed the following resolution:—

"That this meeting expresses its satisfaction at the founding of a British Society for the Promotion of Medical Balneology and Climatology, and commends it to the sympathy and support of the profession at large and especially to the medical men connected with the health resorts of this country."

He said such a society would benefit both the practitioner at the health resort and the profession generally. He referred to the greater attractions which were provided at foreign health resorts, and remarked that patients were often sent abroad who might be more successfully treated at home.

Dr. WM. SNOW (Bournemouth), in seconding the resolution, endorsed the remarks of the previous speaker.

Dr. HERMANN WEBER spoke in favour of English health resorts and spas. He emphasised the importance of the medical man in rendering the resources of a place useful to his patients. He must avail himself of all the good points of a climate and protect the patient from the influence of the bad points. In the case of waters, he must give exact directions as to their use and adapt them to the needs of his patient. The medical man is the most important agent, the most important part of the spas and of the climate. Advantage must be

taken of the lessons of psychology. The mind was a most powerful agent in chronic disease. Patients must be made cheerful and stimulated with hope.

Dr. W. EWART thought it would be far better to recommend a patient to a fellow-countryman and to a health resort at home than to a foreign one. The difficulty in corresponding with a foreign medical man was very great, but in England they had the advantage of a similarity of ideas and a common language. If they were to utilise the home resorts, however, they must be familiar with them or know something about them, and he thought the society would be an immense benefit to both the profession and the public in this direction.

Dr. F. BAGSHAWE (St. Leonards-on-Sea), Dr. R. O. GIFFORD BENNET (Buxton), and Dr. FORTESCUE FOX (Strathpeffer Spa), who referred to the great opportunities which the practitioners of our watering-places had of adding to our knowledge of chronic disease, Dr. KINGSBURY (Blackpool), and Mr. WARD-HUMPHREYS (Cheltenham) also spoke to the resolution, which was unanimously carried.

Dr. J. G. DOUGLAS KERR (Bath) and Dr. HERON respectively proposed and seconded a vote of thanks to Dr. Weber, Dr. Ewart, and other speakers, and the meeting terminated.

After the meeting the Blue Zouave Ladies' Orchestra played a selection of music during the conversazione which brought to a close a most enjoyable evening.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Circumstances of the City of Exeter. By Dr. W. W. E. FLETCHER.—It would appear that the Local Government Board have for many years found it difficult to get any sufficient information from the town council of Exeter as to the sanitary circumstances and administration of the city. Exeter seems to be one of the few remaining boroughs which appointed their medical officer of health under circumstances which freed them from the legal obligation to send annual reports to Whitehall, and when, owing to anticipations of cholera ten years ago, the Local Government Board ordered an inspection of the city by one of their own staff an array of recommendations was made which went to indicate that there was ample need for amendment. Since then the city has persistently withheld information as to the action it was taking or neglecting to take; indeed, the corporation ignored the ordinary civilities of official as well as of private life, and did not even acknowledge the letters of the central authority. In 1894 Dr. Bulstrode again visited the city and had to make much the same recommendations as were made ten years before, and since then the Board's letters have again been altogether ignored by the corporation. It was under these circumstances, so suspicious of there being something really to hide, that Dr. Fletcher has again visited the cathedral city of the West of England, and a somewhat detailed report is the result. In the matter of water-supply Exeter has nothing to boast of; the supply is from the river Exe. One mile above the intake Brampford Speke is said to drain into the river; three miles further up, the sewage of 600 people in Thorverton gets to the river by means of a brook; seven miles beyond is the outfall from the sewage farm of Tiverton East, with its 6500 people, where a large volume of untreated sewage goes direct into the Exe; and the west side of Tiverton contributes to the stream the dejecta of 2500 more people. Then, higher up, comes Bampton with a population of 1672; but when extension of sewers was proposed Exeter seems to have considered that the river supplying its citizens with water had quite as much befoulment as was desirable at the present period of hygienic progress, and objected. The water, befouled as stated, is passed into settling tanks and is filtered before delivery; but the citizens must be easily contented if they are satisfied with the existing state of affairs. In the matter of sewers a good deal seems to have been done since the date of Dr. Bulstrode's visit, and Dr. Fletcher is able to give faint praise by saying that, generally, the condition of the sewers is not unsatisfactory; but he adds that the sewer system cannot be considered as well ventilated. The disposal of the sewage can, also, hardly fail to cause nuisance at certain seasons; it goes direct to the river, and in dry weather, when the river is low, there has been a tendency to foul deposits, to decomposition, and to offensiveness which has been complained of. Besides which private drains, water-closets, and privies are allowed to discharge directly into leats leading to the river; indeed, a proposal has been submitted to remedy this unwholesome state of affairs by the construction of a large intercepting sewer. Dr. Fletcher also reports some substantial action with regard to house drains. He says that improvements as to closets have been adopted, except as regards the privies referred to; that scavenging is carried out by the corporation; and that some of the modern house accommodation is good and comfortable. But he adds that it has never fallen to his lot to see in a comparatively small area so many dilapidated, ill-ventilated, badly lighted, and filthy dwellings, and he marvels how this reticent town council can tolerate, in its capacity as a sanitary authority, a state of things which is a "disgrace to the city." "House accommodation for the lowest of the working classes ..... may be said to be as bad as it can be." The medical arrangements for the sanitary supervision of the city are peculiar. There are a superintending medical officer of health and three Poor-law medical officers acting as assistant health officers. This arrangement is not one that we can commend. The multiplication of health officers over one comparatively small area multiplies, if it does not ensure, the chances of putting into office those who have had no training for their health duties, and it tends to lessen the sense of individual responsibility to the sanitary authority. On the whole, it is evident that, whilst Exeter has not been idle in sanitary progress, yet it embodies quite enough that calls for adverse comment as in some measure to explain the desire of the corporation to keep things quiet by means of a judicious silence. Perhaps, now that the Local Government Board have placed Exeter on a par, as regards publicity as to its sanitary work, with the remainder of the sanitary authorities of England and Wales—who not only answer letters, but who regularly issue their sanitary reports—they will—pending the Exeter town council's attitude of reserve—periodically inspect and report on the city. Such a practice would be of advantage to those amongst the citizens who know the value of efficient sanitary work.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Mary, Islington.—Mr. Alfred Harris's report for 1894 has but just reached us. The general death-rate of the parish (population 331,901) was for the year under review 15·8 per 1000, the lowest rate for this parish Mr. Harris has been able to discover. As instancing the value of notification he has drawn up a table giving a list of the trades carried on in houses where infectious disease occurred during 1894, and he points out that many of these businesses would easily lend themselves to the propagation of infectious disease were not vigorous steps taken as a result of notification. The sanitary authority of Islington is to be congratulated on having erected during 1894 what appears to be an eminently modern disinfecting station. In it are provided two steam disinfecting chambers, a laundry, an office, two shelters for the vans used for the conveyance of infected and disinfected clothing respectively, and a crematorium for the destruction of infected bedding &c. It is the laundry which is a new departure, and it has been erected owing to the experience which Mr. Harris has acquired elsewhere that articles not infrequently arrive in a filthy condition, and that their return in that same state, although efficiently disinfected, has given rise to the belief in the popular mind that they have been instrumental in the spread of disease. For the future soiled articles will be returned only after having been carefully cleansed in the laundry. A shelter under Section 60 of the Public Health (London) Act, 1891, was also erected in 1894, so that the district must be congratulated upon having made considerable progress in the matter of its sanitary provisions.

Leeds Sanitary District.—The year 1894 will stand out in the sanitary chronicles of Leeds as that in which compulsory notification was adopted. The Act came into force on May 1st, 1894, and between that date and Dec. 30th as many as 1448 notifications were received, figures that will convey some idea of the large amount of extra work thereby entailed. Of the 1448 cases 500 were isolated in hospital, the fatality-rate amongst these being 4·8 per cent. as against 9·7 amongst those treated at home. As, however, Dr.

Spottiswoode Cameron points out, too much reliance must not be placed upon the proportions thus brought out; the numbers are small and relate to only eight months of the year. There are also questions of class differences, of cases too ill to be removed, and of unrecognised and consequently unnotified cases to be allowed for in these calculations; as also, on the other side, cases sent into hospital when all chances of recovery are past. In that portion of his report dealing with zymotic diseases Dr. Cameron gives an interesting account of the small-pox cases. He points out that the case mortality figures for the four years 1891–94 exhibit, as far as such small numbers will allow of an inference, a good indication of the increase and decrease of virulence on the rise and fall of the epidemic, the rates per cent. being for the four years respectively 2, 6·3, 5·5, and 2·2. There were during 1894 93 cases of small-pox, and of these 90 were removed to hospital. There were 314 persons temporarily isolated at the sanatorium cottages during the year, and of these 260 were from houses undoubtedly invaded with small-pox. Out of this number 2 had developed the eruption before they had arrived at the sanatorium, and a third developed it the day after arrival. Omitting these three there were 13, or 5 per cent., out of the total 257 who developed small-pox while under observation. Of the 257 cases who had been in contact with small-pox 22 had already had the disease or been re-vaccinated before exposure, and of these none were attacked. Out of 198 persons of ages varying from five months to seventy-one years, all of whom had been vaccinated—for the most part in infancy—4 per cent. developed small-pox. In 17 cases there was insufficient evidence as regards vaccination, and of these 1 (6 per cent.) contracted the disease; while of 20 who were admittedly unvaccinated before exposure, 4 (20 per cent.) had small-pox. Some very interesting figures are also given by Dr. Cameron showing the value of vaccination and re-vaccination after exposure to small-pox. Among the numerous other questions dealt with in this interesting report Dr. Cameron gives an excellent example of the necessity for systematic drain testing; he tells us that during 1894 the testing of 2038 drains, made in consequence of the presence of infectious disease, revealed no less than 1653 defects; and in reference to the results of a localised testing of drains, due to an outbreak of diphtheria, Dr. Cameron observes that "had the houses been examined and tests applied as part of the previous systematic house-to-house examination of the ward, it is probable that we should not have had to examine so many of them afterwards on account of illness." There occurred in Leeds during 1894 an outbreak of what was apparently ptomaine poisoning due to the consumption of potted meat; some dozen persons who had partaken of this were attacked with symptoms of English cholera. The sanitary condition of the premises in which the meat was manufactured was not, it appears, altogether unfavourable to the development of putrefactive organisms; and in this connexion Dr. Cameron observes that, although two inspectors are told off to inspect all the meat shops in the city, they have, besides, the inspectorial supervision of the fish and fruit market and the 130 private slaughter-houses dotted about the 22,000 acres of the city. And what, he asks, are they among so many?

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5920 births and 3906 deaths were registered during the week ending Jan. 25th. The annual rate of mortality in these towns, which had been 18·4 and 19·7 per 1000 in the two preceding weeks, declined again last week to 18·8. In London the rate was 18·6 per 1000, while it averaged 18·9 in the thirty-two provincial towns. The lowest rates in these towns were 12·2 in Cardiff, 13·0 in Brighton, 14·0 in West Ham, 14·8 in Gateshead, and 14·9 in Bristol; the highest rates were 21·8 in Burnley, 22·5 in Bolton, 22·7 in Manchester, 24·6 in Liverpool, and 25·0 in Salford. The 3905 deaths included 492 which were referred to the principal zymotic diseases, against 508 and 564 in the two preceding weeks; of these, 142 resulted from measles, 128 from whooping-cough, 95 from diphtheria, 59 from scarlet fever, 42 from "fever" (principally enteric), 26 from diarrhœa, and not one from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Oldham, Swansea, and Derby, and the highest rates in Burnley, London, Bolton, and Birmingham. The greatest mortality from measles occurred in London, Leicester, and Birmingham; from scarlet fever in Wolverhampton; from whooping-cough in West Ham, Birkenhead, Portsmouth, and Bolton; and from "fever" in Gateshead. The 95 deaths from diphtheria included 51 in London, 12 in Birmingham, 4 in Salford, and 3 each in West Ham, Liverpool, Burnley, and Hull. No fatal case of small-pox was registered last week either in London or in any other of the thirty-three towns. There were 70 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Jan. 25th, against 68, 66, and 73 at the end of the three preceding weeks; 14 new cases were admitted during the week, against 9, 20, and 17 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2916, against 2830, 2832, and 2883 on the three preceding Saturdays; 290 new cases were admitted during the week, against 320, 295, and 280 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 320 and 336 in the two preceding weeks, further rose to 356 last week, but were 253 below the corrected average. The causes of 58, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Bradford, Hull, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Birmingham, Nottingham, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 21·0 to 19·5 per 1000, rose again to 20·1 during the week ending Jan. 25th, and exceeded by 1·3 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·4 in Leith and 15·8 in Edinburgh to 22·2 in Perth and 29·3 in Dundee. The 586 deaths in these towns included 29 which were referred to whooping-cough, 11 to diarrhœa, 9 to measles, 4 to diphtheria, 3 to "fever," 3 to scarlet fever, and not one to small-pox. In all, 59 deaths resulted from these principal zymotic diseases, against 63 and 73 in the two preceding weeks. These 59 deaths were equal to an annual rate of 2·0 per 1000, which was 0·4 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 23 and 38 in the two preceding weeks, declined to 29 last week, of which 13 occurred in Glasgow, 8 in Dundee, and 6 in Aberdeen. The 11 deaths from diarrhœa showed a further decline from the numbers recorded in recent weeks, and included 4 in Glasgow and 3 in Dundee. The fatal cases of measles, which had been 14 and 6 in the two preceding weeks, rose again to 9 last week, of which 5 occurred in Glasgow and 4 in Greenock. The 4 deaths referred to diphtheria showed a slight further increase upon recent weekly numbers, and included 2 in Dundee and 2 in Aberdeen. The fatal cases of scarlet fever, which had been 2 and 6 in the two preceding weeks, declined again to 3 last week. The deaths referred to different forms of "fever," which had been 4, 3, and 5 in the three preceding weeks, declined to 3 last week. The deaths from diseases of the respiratory organs in these towns, which had been 131 and 136 in the two preceding weeks, further rose to 142 last week, but were 44 below the number in the corresponding period of last year. The causes of 34, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 28·8 to 22·5 per 1000, rose again to 27·4 during the week ending Jan. 25th. During the past four weeks of the current quarter the rate of mortality in the city has averaged 26·8 per 1000, the rate during the same period being 19·0 in London and 16·3 in Edinburgh. The 184 deaths registered in Dublin during the week under notice showed an increase of 33 upon the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 7 and 4 in the two

preceding weeks; of these, 6 resulted from "fever," 3 from diarrhœa, 1 from scarlet fever, and 1 from whooping-cough, but not one either from small-pox, measles, or diphtheria. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 3·0 in London and 0·9 in Edinburgh. The deaths referred to different forms of "fever," which had been 2 in each of the two preceding weeks, rose to 6 last week—a higher number than in any week since October last. The 184 deaths registered in Dublin last week included 36 of infants under one year of age, and 60 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked increase upon the numbers recorded in the preceding week. Twelve inquest cases and 9 deaths from violence were registered; and 52, or more than a fourth, of the deaths occurred in public institutions. The causes of 18, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL MOORE-KEYS and Surgeon-Major Barker have arrived from Jamaica, and Surgeon-Captains Clapham, Ferguson, and Graham from Barbadoes on completion of a tour of service. Surgeon-Majors Hayes and Johnstone, and Surgeon-Captains Brown and Edge have arrived at Hong-Kong. Surgeon-Major Lyle has embarked for India.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel George Corry retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Lieutenant-Colonel A. Scott Reid, M.B. (Bengal), M.O., 2nd Battalion, 4th Gurkha Regiment, are replaced at the disposal of the Military Department. Surgeon-Colonel R. P. Ferguson, A.M.S., P.M.O., Sirhind District, is appointed to officiate as P.M.O., Bengal Command, with the temporary rank of Surgeon-Major-General, vice Surgeon-Major-General T. Maunsell, C.B., P.M.O., Malta. Brigade-Surgeon-Lieutenant-Colonel W. J. Charlton, A.M.S., is appointed to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel, vice Surgeon-Colonel R. P. Ferguson. The services of Surgeon-Captain W. H. Gray (Bengal), M.O., 19th Punjab Infantry, are placed at the disposal of the Chief Commissioner of the Central Provinces. The services of Surgeon-Captain A. G. Hendley (Bengal) are placed permanently at the disposal of the Chief Commissioner of the Central Provinces. The services of Surgeon-Major F. F. Perry are replaced at the disposal of the Government of the Punjab. The services of Surgeon-Captain R. C. MacWatt (Bengal), Superintendent of the Central Gaol at Raipur, are replaced at the disposal of the Military Department.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Surgeon H. B. Hall to the *Ganges*, Civil Practitioner A. Macintosh to be Surgeon to Agent at Port Patrick.

LEEDS VOLUNTEER MEDICAL STAFF CORPS.

Surgeon-Colonel W. D. Wilson, A.M.S., Principal Medical Officer of the North-Eastern District, presided on Jan. 24th at the annual distribution of prizes in connexion with the Leeds Company Volunteer Medical Staff Corps, in the Drill Hall of the Leeds Rifles. Among those present were Surgeon-Captain Croft, Brigade-Surgeon-Lieutenant-Colonel Loe, Surgeon-Major W. Symes, Surgeon-Major Richardson, Surgeon-Captain Brown, Surgeon-Captain Grange, Surgeon-Lieutenant Nightingale, and Surgeon-Captain Birch. Surgeon-Colonel Wilson, who congratulated the company on their efficiency and sound financial position, said he noticed that they had not a sufficient number of officers. He regretted that, for this was a scientific corps, and as such should have its full complement of officers. Medical men in civil life had little time to devote to external duties, and it was only the most enthusiastic members that could find time for the Volunteer Medical Service. If honour were measured by dangers incurred, the Medical Services would be at the top, or near the top, of the roll of honour. Their services in defence of their country might never be required, but it was necessary in these days to be ready. England could not hope to hold her vast possessions if she was not ready to defend them; and if the regular army left our shores the defence of this country would fall principally on the Volunteers, and they would be called upon to bear their part. Let their motto, therefore, be "Ready."

THE ITALIANS IN EAST AFRICA.

The Italian force has shown great fortitude, as well as gallantry, under very trying circumstances in Abyssinia. The garrison of Makaleh especially, under the command of Colonel Galliano, has been hard pressed. The water-supply was exhausted, and the unfortunate horses and other animals in Makaleh must have undergone great suffering from the water famine. The garrison of the fort had been put on a ration of a quarter of a litre a day of the only water obtainable, and this is stated to have been of bad quality. The Abyssinians behaved with a consideration which was somewhat magnanimous under the circumstances. King Menelik supplied the garrison with water and authorised the departure of the troops to Adigrat with the wounded, the women, and the army ammunition and baggage, Ras Makonnen giving a guarantee for the due performance of the engagements undertaken. Colonel Galliano and the Italian garrison consequently marched out of the fort, under the protection of Ras Makonnen, with the honours of war, advancing by short stages in order to affect the easy transport of the wounded. It is stated that King Menelik has proffered proposals for peace to General Baratieri, in command of the Italians in Africa, but it is not known whether these will be accepted.

THE REBELLION IN CUBA.

Amid the military expeditions, wars, and political excitements of the day the insurrection in Cuba occupies a place, for it forms a formidable difficulty for Spain, the situation being of rather a critical character at the present time. The Spanish Government has a very large and a very costly force in Cuba. In addition to the losses from fighting various desultory engagements with the insurgents in a kind of guerilla warfare, the Spanish troops have suffered much from fever and other diseases incidental to armies in the field. Marshal Campos will soon be relieved by General Weyler, who is to be the new Commander-in-Chief in Cuba. Uncommonly little is known of the medical state of affairs in Cuba and of the losses which the Spanish force has sustained from sickness, wounds, and invaliding since the commencement of the Cuban campaign, but these must have been considerable.

DEATH IN THE SERVICES.

Surgeon-Major John Adsetts, M.R.C.S., L.S.A., A.M.S. (Retired List), at Derby, on Jan. 18th, aged fifty-nine years. He joined the Army June 13th, 1859, became Surgeon-Major Dec. 16th, 1874, and retired June 4th, 1876.

Surgeon-Colonel Lionel Dixon Spencer, C.B., M.D., M.R.C.S., I.M.S., has been granted a good service pension of £100 per annum. In his capacity as principal medical officer of the Punjab Frontier Force he served with the Waziristan Field Force under Sir Wm. Lockhart in 1894-5, and was mentioned in despatches, receiving the Companionship of the Bath and the medal with clasp. He entered the Army in 1865, and was made Surgeon-Colonel in 1892.

Surgeon-Captain C. Duer, I.M.S., has passed the Higher Standard Examination in Pushtu.

THE HOSPITAL QUESTION AT SOUTHAMPTON.—The congestion of isolation accommodation at Southampton has led to the closing of the West Quay Hospital to further cases of infectious disease. A disused factory was offered to the health committee of the council, but the great expense that would be necessary to fit it for the purpose and other reasons have led the committee to decline the offer. Should the efforts which are now being vigorously put forward to secure a suggested site for a new building prove successful a temporary erection will be constructed to relieve the crowded Quay Hospital. Sixty-eight cases of infectious disease were notified during the month of December, of which fifty-two were of scarlet fever. The county council of the town last week instructed the medical officer to put in force the cholera regulations against ports in the Black Sea, Constantinople, and Alexandria.

Correspondence.

"Audi alteram partem."

THE MANUFACTURE OF DRUNKARDS AND DRUGGARDS.

To the Editors of THE LANCET.

SIRS,—In common, doubtless, with the profession in this country generally I have received an invitation to take debentures in a certain company who are pushing two wine compounds. You, Sirs, have raised your voice against this scheme of inducing medical men to become pecuniarily interested in the sale of special preparations, and I had hoped your strictures would have prevented a repetition of the attempt—at any rate, by the same offender.

I must confess to a feeling of humiliation when I read that 6000 testimonials have been received in favour of these two drinks. Certainly it would appear that gratitude is a feeling easily provoked in the profession by a liberal supply of samples. Is it not true that the whole question of the use of medicated wines was discussed? Why should malt, iron, coca, and bark have their "wines"? The answer should be, not that it is necessary for these foods or drugs to be given with wine, but because the public are glad of any excuse for taking stimulants or narcotics. Under the cloak of "tonic and dietetic" wine compounds many people are led into the habit of secret drinking. And what shall we say if the profession by testimonial giving and prescribing help on this undesirable state of things? Surely when wine is needed we can order it in whatever kind and amount we think fit and the drugs in a separate prescription. Why jumble them up together? There can be no doubt that immense injury accrues to the community by the reckless use of coca, malt, and other made-up wines for the road to the habitual use of actual narcotics from drugged wine-taking is as easy as it is fascinating. It would be well-nigh impossible to obtain a trustworthy account of the manner in which the slaves to narcotics were led into their bondage, but the bare possibility that we may, by prescribing these compounds, forge the first link of a chain that will later bind the victim down should make us realise our responsibility. A chemist who was formerly one of a large staff of dispensers at one of the well-known coöperative stores gave me a startling account of the enormous sale there of narcotic drugs, especially to women. Some of the customers had weekly supplies, such as three dozen ½ gr. of morphia in packets the size of a postage stamp, 90 ½ gr. ext. opii pills, and another twenty-four sulphonal powders. One lady had periodically liq. morph. hypoderm. ℥ii. What, then, should be the attitude of the profession in this matter? 1. That we should strictly refuse to have any commercial interest in the class of preparations here referred to. 2. That we should prescribe wine and drugs separately and in specified quantities. 3. That in prescribing narcotics we should order them in such a form as to make it difficult for the patient to obtain the drug in large quantities. I am, Sirs, yours truly,

Weymouth-street, W., Jan. 17th, 1896. CHAS. W. CHAPMAN.

"WHAT IS A 'NATURAL LABOUR'?"

To the Editors of THE LANCET.

SIRS,—The letter of Dr. Fraser upon this subject should not pass unchallenged. Ten days before the meeting at which he had occasion to speak he had, alike with all the other members of the Lancashire and Cheshire Branch of the British Medical Association, a printed copy of the Midwifery Nurses Bill and the amendments which were to be submitted to that meeting. These amendments were considered and adopted by the council immediately before the branch meeting, and the President distinctly stated this before the discussion upon the Bill and the amendments was entered upon, carefully indicating that the Bill as it then stood included those amendments — in fact, as far as the council was concerned, they were a part of it. Amongst Mr. Horace Jefferies' series of amendments was one amplifying the definition, inasmuch as the system of medical control was definitely indicated by the adoption of regulations, restrictions, instructions, and method of medical control and supervision embodied in an appendix to the Bill, so that the definition before the meeting was: "In this Act the term midwifery nurse means a woman who attends cases of natural labour and afterwards tends the mother and child during the lying-in period, under the rules, regulations, and medical control or supervision set forth in this Act and the Appendix thereto, and any amendments of or additions to such Appendix which may be from time to time laid down by the Midwifery Nurses Board."

Your correspondent avoids any reference to this amendment. Dr. Fraser also had a copy of the appendix containing these restrictions and regulations. The following are examples of the conditions in which it is imperative that the midwifery nurse should call in a medical man:—In all cases of ruptured perineum as soon as it occurs. If the placenta is not expelled in an hour after the birth of the child, even if no bleeding has occurred. In the apparently dead new-born child. In presentation of hands, feet, or when the cord presents with the head. If the patient or her relations wish for a medical man, even if the midwife does not see any abnormal symptoms, she is not to object. She must bring before the notice of the coroner every case of still birth, no matter at what period of development. Surely it is of no moment whether you speak of natural labour or not, seeing that the duty of determining what this is is entirely removed from the discretion of the midwifery nurse, nor for the matter of that does it signify whether she be called a midwife, nurse-midwife, or midwifery-nurse, her duties are laid down in this Bill and its Appendix with such scrupulous definiteness.

Now Dr. Fraser persisted in reading a long written speech with which, and the valuable legal opinion, he came armed, neither of which were in the least applicable to the Bill under discussion. This speech was made in support of an amendment to the Bill proposed by Mr. R. H. Wolstenholme, in which objection was taken *inter alia* to one clause because it "failed to sufficiently protect the rights of registered medical practitioners." I quite admit that it would have been a difficult task for Dr. Fraser to address himself to the altered conditions at so short a notice, because his prepared speech showed clearly that he had disregarded the amendments of which he had warning, especially seeing that he took for the text of his speech a report drawn up by three gentlemen constituting the Parliamentary Bills Committee of the Medical Guild. As to the worthlessness of the term "natural labour," Dr. Fraser would wish us to regard him as the first to have seen through the faultiness of the perplexing definitions of this term to be found in the various text-books. The absurdity of applying to a firm of solicitors for a definition of a phrase upon which the medical profession cannot agree is clearly pointed out in the reply he received from Messrs. Boote and Edgar, who point out that the "legal significance" must be decided upon the evidence of medical experts.

Allow me to make reference to another clause of Dr. Fraser's text. He asked the meeting to condemn section 1 of Clause 3 because it only prevents the assumption of "titles." An amendment of my own, which was also adopted by the Council, makes it penal for any midwife to practise without being registered under this Act. The position Dr. Fraser had placed himself in was effectively exposed by Dr. Woodcock and Dr. Ritchie, and the amendment which he had supported was rejected by an overwhelming majority.—I am, Sirs, yours faithfully,

Old Trafford, Jan. 21st, 1896. JAMES BRASSEY BRIERLEY.

To the Editors of THE LANCET.

SIRS,—The Lancashire and Cheshire Branch of the British Medical Association has adopted a draft Midwifery Nurses Bill in which the term "natural labour" occurs three times, but in which there is not the slightest attempt at a definition of that term. The official defenders of the Bill (especially Dr. Brierley of Manchester) now maintain that this expression has "no meaning whatsoever" and "no value whatever." If this be the case, why was it inserted in the Bill at all, and why did not one of them move its deletion? Can it be possible that it was only inserted as a "placebo," to give the profession a feeling of security, however false? If the phrase has no meaning let it be deleted; if it has a meaning let it be clearly defined. The supporters of the Bill appear to derive great satisfaction from the amendments proposed by Mr. Jefferies and accepted at the last moment by the Council. The fact that they were

deemed essential is sufficient evidence of the character of the draft Bill when first submitted to the branch. The amendments themselves are taken from the Austrian Code (1881) for the regulation of the practice of midwives in Austria, and a single glance at them will show with what security they may be relied on to protect the interests of the public in this country. *Regulation 8:* "Midwives are most strictly forbidden to undertake any operation upon women in pregnancy, labour, or lying-in, or children, *unless in urgent necessity.*" It appears to me that the last clause takes away the protective character of the entire rule, whilst the bare possibility of a "registered midwifery nurse" performing operations during pregnancy, &c., ought to make the profession extremely careful.

Dr. Brierley writes in another place about the "stupidity of asking a midwife to determine during the course of a labour when the case ceases to be physiological and becomes pathological," and yet the Austrian rules which he so highly commends not only require her to do this, but also empower her to operate, and apparently trust her with the responsibility of determining the "urgency" thereof.

Austrian code.—B. 7. "Midwives are bound in all cases of abnormal *pregnancy*, labour, or lying-in to demand medical assistance." If the nurse, whom it is proposed to register in England, is unable to recognise a "natural labour," how can she diagnose an "abnormal pregnancy"? Also, *a.* (1) If she suspects or has *discovered* a narrow pelvis. *b.* (1) In all cases of abnormal position, if possible before the liquor amnii escapes; (7) in presenting placenta, even when she does not at the moment of examination perceive any bleeding. It appears to me that a midwife who could carry out the above instructions would be quite able to recognise a "natural labour," however it might be defined.

With regard to the proposed Bill, the value of its restrictive clauses depends entirely upon whatever use the proposed Midwifery Nurses Board might make of them. That body is to play the part of the *deus ex machinâ*. On its appearance the demands of the midwives, the privileges of the profession, and the interests of the public are all to be adjusted. To this hypothetical body, whose constitution is uncertain, and whose laws are not yet written, is to be entrusted the control of three-fourths of the midwifery practice of the future. Its judgment is to be final with regard to the "professional status" of probably 20,000 midwives, yet this draft Bill proposes that not a single representative of the midwifery nurses shall have a seat on its board. This proposal is absurdly inequitable and certain not to be accepted; nevertheless, upon this embryonic "board" the profession is invited to rely. The General Medical Council is supposed to have similar powers over the medical profession, and many of us have our own opinions on the masterly manner in which that august body succeeds in doing nothing. Suppose for a moment that the proposed Midwifery Nurses Board adopt the same policy of *inertia*, by how much, I wonder, will the world be benefited by the draft Bill of the Lancashire and Cheshire Branch.

I am, Sirs, yours truly,

Salford, Jan. 25th, 1896. R. H. WOLSTENHOLME.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 18th I note the following from the pen of your Special Commissioner: "Sometimes they [i.e., dispensary medical officers for friendly societies] are retired naval medical officers, who have acquired such a rough manner in dealing with sailors that they give offence to a civil population comprising many women and children." Now, Sirs, I venture to say that he is completely mistaken in this. I can quite understand a naval surgeon whose name has been removed from the Navy List for conduct unbecoming an officer and a gentleman accepting the position of surgeon to a medical aid association—he would be just the man for the berth; but I should be astonished to find any respectable surgeon on the retired list who would disgrace himself and disgrace the service by accepting such an appointment. I should be surprised even to find that a Surgeon R.N., retired, would do club work of any description. Your correspondent's remarks *re* a rough manner in dealing with sailors are uncalled for. The British tar is one of the finest fellows in this wide world. Lord Charles Beresford says he is a far better specimen of a gentleman than many West-end swells, and I thoroughly agree with him. At any rate, he is a god upon earth compared with a club patient. Naval surgeons know all this well, and, instead of being rough to Jack, have the greatest respect for him. Jack, too, respects his medical man, and speaks of him as "Mr." or "Dr.," as the case may be. This cannot be said of the club patient, who speaks of his medical man as Brown, Jones, or Robinson. In my opinion it is just the style of treatment that Brown, Jones, and Robinson deserve. I could mention things connected with club and medical aid practice in this town that would make the great Wakley turn in his grave. You, Sirs, deserve the thanks of the profession for your efforts, but I fear you are on the "wrong tack"; you will never unite the profession. You will only effect its reformation by inducing the General Medical Council to wipe all "blacklegs" off the Register or getting the licensing bodies to withdraw their diplomas. I myself am opposed to club work of every description. I think the profession should recognise two classes—viz., those who are able to pay and those who are not. The former should be made to pay small or large fees, according to their means. The latter should be looked after by the parish medical officer, who should be paid handsomely for his services. I am, Sirs, yours truly,

Jan. 27th, 1896. SURGEON, R.N. (retired).

To the Editors of THE LANCET.

SIRS,—Much of the work would be done in fighting the low club rates if the General Medical Council would pass a by-law counting touting or canvassing for individual practitioners by means of paid canvassers or collectors infamous conduct.—I am, Sirs, yours truly,

LENNOX WAINWRIGHT.

Sandgate-road, Folkestone, Jan. 14th, 1896.

ELECTION OF A DIRECT REPRESENTATIVE FOR IRELAND ON THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—At a meeting of the medical profession of the city and county of Cork, held on Jan. 25th, the following resolution was unanimously adopted:—"That the Cork medical profession undertake the preliminary poll for a direct representative on the General Medical Council between the three provincial practitioners now before us—i.e., Dr. Cuming, Dr. Greene, and Dr. MacDonnell—provided the expenses incurred are guaranteed, and that the unsuccessful candidates agree to retire in favour of the candidate who receives the greatest amount of support." A committee was appointed with full powers to carry out this resolution. Having got guarantees on these points, the Cork profession are now carrying out the preliminary poll, for which it is expected that voting cards will be issued on Friday next, and the result will be declared on that day week, of which we will send you notice. I am, Sirs, yours truly,

St. Patrick's-hill, Cork, Jan. 28th, 1896. PHILIP LEE.

To the Editors of THE LANCET.

SIRS,—As the election of a direct representative for Ireland to the Medical Council takes place shortly, and as no definite programme has been placed before the electors, may I, as one deeply interested in the subject of direct representation, suggest that the candidates should give answers in THE LANCET to the following questions, so that their views may be fully understood.

Questions: Will you *actively oppose?*—1. Any proposal which has for its object the formation of any inferior order of medical, surgical, or midwifery practitioners, and so oppose the proposed repeal of the Medical Act, 1886. Will you *actively support?*—2. The proposed increase in the present number of direct representatives on the Medical Council. 3. Any measure which will make the entrance examination much more stringent than it is now, so that undesirable persons may be "weeded out" at the *beginning* of the medical curriculum and not at its *termination*, and so that the present large supply of by the medical schools and examining bodies, may be greatly lessened. 4. Any proposal which will bring back the system of apprenticeship so that practitioners may be

supplied with assistants. (By an "apprentice" is meant a person who has passed the entrance examination, put in three years of his medical curriculum, passed the first and second medical examinations, who is not more than twenty-four years of age, who must not act as an apprentice for more than two years, and where not more than one such is employed by a practitioner.) 5. The formation of one medical examining board in each of the three divisions of the United Kingdom to conduct the final examination only; all the previous examinations to be conducted as at present arranged. 6. The proposal that no person shall be permitted to begin his or her medical curriculum until such person has completed the age of eighteen years. 7. The opening of Poor-law infirmaries for the clinical instruction of medical students, and the recognition of such places of instruction by the medical examining bodies. 8. The compulsory registration of all stillborn infants. 9. The amending of the Births and Deaths Registration Act and the providing for the payment out of the public funds of practitioners for medical certificates of the cause of death.

Answers to these questions would concentrate discussion, provide a definite programme, and allow of a complete understanding of the views held by the candidates upon some of the most anxious questions of to-day.

I am, Sirs, yours faithfully,

Liverpool, Jan. 27th, 1896. ROBERT R. RENTOUL.

THE CASE OF MR. R. B. ANDERSON.

To the Editors of THE LANCET.

SIRS,—May I ask the favour of space for the enclosed letter and to be allowed to express my very sincere thanks to Barbados for its kind and liberal help and for the terms in which it is conveyed? In that independent and high-spirited community I first found response to the appeal of the oppressed colony of Trinidad and Tobago and to my own: the members of the branch last year subscribed most liberally to the funds, and this spontaneous continuance to me of that help which I so greatly need is for these reasons doubly valued. I propose to hand the P.O.O. to the Civil Rights Defence Committee, and ask that some part of the whole of it be paid to me for "Personal Expenses Fund," so kindly and thoughtfully commenced by Dr. Robert Barnes, F.R.C.S. Eng., which the committee is good enough to administer. Prior to the creation of this fund I had most kind personal assistance, which I hope now to obtain permission to include in it and to thus acknowledge, and for which, as well as the kindness and public spirit of subscribers to the appeal funds, I desire to be permitted to express my warmest thanks. Fully believing we shall achieve eventual success,

I am, Sirs, your obedient servant,

30, Montague-place, W.C., Jan. 22nd, 1896. R. B. ANDERSON.

[COPY.]

"Briarfield, Barbados, B.W.I., Jan. 10th, 1896.

"R. B. Anderson, Esq., F.R.C.S. Eng.

"DEAR SIR,—At a meeting of the Barbados Branch of the British Medical Association, held on the 13th ult., the subject of your continued 'judicial persecution' was strongly brought to the notice of members by our President, Dr. G. O'Donnell Walton. As an outcome the following resolution was moved at a full meeting on the 3rd inst. by Dr. J. R. Phillips, seconded by Dr. T. Law Gaskin, and carried unanimously, viz.: 'That £10 be granted from the funds of the Branch to Mr. R. B. Anderson towards his expenses, whether personal or legal, in his present endeavour to obtain justice.' I therefore have much pleasure in enclosing herewith a P.O.O. for that amount, payable to you at the G.P.O., London, to be applied by you in accordance with the terms of the resolution.

"I am, dear Sir, yours faithfully,

"E. HOWARD BANNISTER, Hon. Sec."

METRO-PERITONEAL FISTULA IN A CRIMINAL PROSECUTION.

To the Editors of THE LANCET.

SIRS,—The pitfalls in the course of the practice of medicine are sufficiently numerous already, and any addition to them may indeed be viewed with dismay. That a condition so rare as peritoneal fistula is to rank as this addition will be regarded with surprise, for I do not believe that I have yet persuaded all my professional brethren as to the reality of its existence. Here, however, is a case which brings it out into reality with dramatic force. The narrative of the case is necessarily incomplete and to save your space I have shorn it of some unimportant details. The omission of most consequence is, Where did the catheter get out, or did it get into the peritoneum? Even if the latter I do not think it would matter, as the dates show it could not be there long enough to do much harm and the symptoms made it clear the patient was doomed from sub-acute suppurative peritonitis long before the catheter was inserted. I think with symptoms so grave, had she been under my care, her abdomen would have been cleared out early, but I have not yet carried my views sufficiently into the acceptance of my professional brethren for me to claim that this plan would meet with universal acceptance.

I am, Sirs, yours faithfully,

The Crescent, Birmingham, Jan. 20th, 1896. LAWSON TAIT.

"Clinton, Iowa, January 8th, 1896.

"SIR,—Your work on 'Diseases of Women and Abdominal Surgery' has been a help to me in my work, and the section on 'Metro-peritoneal Fistula' has thrown so much light on a recent case in my own practice for which I am unjustly suffering that I crave your valuable time while I relate it to you. I hope the same love of justice which is shown in your masterly work will prompt you to overlook my mistake and counsel by letter or confirm my diagnosis, by sending across the sea your opinion of this case, for the result of which I was indicted in November last for murder in the first degree. My trial to come off the latter part of January or February 1st. I ask for nothing you cannot conscientiously give, and your kindness will be deeply appreciated.

"Case of Mrs. Emily Johnstone: Seen first Aug. 5th, 1895, in poor general health, married six years, one child and one miscarriage, the full-time labour having occurred fourteen weeks before and having lasted about twenty hours; the perineum was badly lacerated and an attempt at its restoration had been made; did not rise from bed for a month and has been ill ever since. Her main symptoms were pain in back and lower pelvis, severe dysuria, thick, purulent, and offensive discharge from vagina with severe itching of vulva, pain in chest running down left arm, quick pulse, and high temperature, always over 100° at night. The urine was scanty, high coloured, and thick, patient frequently sick and always nauseated, in a condition of nervous excitement, and with varying appetite; excessive lactation. Pelvic examination showed that perineal damage went high up, and that cervix was large and patulous. The patient believed herself to be again pregnant on account of the nausea, but I assured her that she was not and that her condition was due to sub-involution of the uterus with its train of symptoms, endometritis with prolapse, and cystitis. I measured the uterus and found it three inches. A short time after she again expressed a belief that she was pregnant, so that on Aug. 16th I passed the sound easily through the open cervix to a depth of six inches, a fact which surprised me, but I felt sure it was due to the subinvolution, and that my first measurement was not correct. The subsequent history shows that I must have entered the abdominal cavity through a metro-peritoneal fistula, on the first occasion the sound having missed this opening. I attended her till Sept. 16th, her symptoms being but little changed, and then, again, she become convinced she was pregnant, no assurance convincing her to the contrary. I told her I would put a rubber catheter in, it could do no harm, and would prove to her she was not pregnant. Therefore on Sept. 18th I disinfected and inserted a catheter, which passed readily, leaving five or six inches in the vagina and guarding it with a tampon, telling her to remove it if there was pain. Immediately on reaching home she began to vomit, and tried to withdraw the tampon and catheter, but as it seemed to go further up she got alarmed and sent for me. I found the catheter had wholly disappeared. I could just feel it within the cervix, but could not remove it. I proposed to give her chloroform to remove it, but she would not consent until her husband came home next day.

"I called Dr. S. in consultation, as the symptoms were of increased severity, and told him the above story, who seemed to accept the woman's view that she was pregnant and that the catheter would come away with the products of conception. A few hours later, through a speculum, I made an effort to remove the catheter, and saw a yellowish membrane appear and disappear at the os; in a few moments I saw small intestine appear, and then knew there had been a rupture and that the intestine was coming down through it. By this time she had bearing-down expulsive pains. I again called in Dr. S., who called in three others, and after consultation it was decided to wait for morning light. The bowel was then five or six inches through the cervix and was becoming strangulated. Laparotomy was performed, but the patient died during the operation. The pelvic cavity was full of pus, and a rent in the fundus uteri nearly an inch in extent, with edges so friable that they would not hold sutures, and there was general peritonitis.

"A post-mortem examination was made by order of the coroner, and it was proved that she was not pregnant as she herself had believed, but the coroner's jury decided that I was guilty of unprofessional and unskilful treatment and I was committed to prison, but bailed out next morning. The grand jury brought in an indictment for murder in the first degree, and I am to be tried as I said.

"I am, very respectfully,

"E. P. PINNEY, M.D."

"SIR,—I have just received your letter with enclosed statement of the case of Mrs. Emily Johnstone. Assuming that the facts of the case are precisely as you have given them, it appears to me monstrous that you should have to defend yourself against such a charge. The explanation is, of course, the great rarity of the combination of circumstances in Mrs. Johnstone's case. There can be no doubt but that the labour you describe had caused a rent in her uterus and a permanent metro-peritoneal fistula, that the uterus remained, as it always does in such cases, sub-involuted, and therefore friable. The sub-acute peritonitis described broke down and ruptured its edges and permitted the extraordinary protrusion of intestine, and I would praise highly your astuteness in recognising such a remarkable occurrence and in refraining from damaging the intestine by futile attempts to remove it. In many hands—in fact I think I may say in most hands—

this is undoubtedly what would have happened, and I do not think it would be seriously blamed.

"Instead of trying you for murder your prosecutors ought to congratulate you on your skill and good judgment. If time permitted I would willingly appear in the witness-box to sustain this my written opinion. Make any use of this you think fit. "LAWSON TAIT."

"THE NEW PHOTOGRAPHY."

To the Editors of THE LANCET.

SIRS,—I have so many applications, chiefly from medical men, for prints of my photographs of the hand that I have arranged with the Swan Electrical Engraving Company, 116, Charing-cross-road, to supply both photographic prints and printing blocks of this or any other of my subjects to anyone requiring them. I should be much obliged if you could kindly mention this in your next issue, as it will relieve me of pressure of correspondence and enable those who wish to get blocks or prints to apply directly for them.

I am, Sirs, yours faithfully,
A. A. C. SWINTON.

66, Victoria-street, London, S.W., Jan. 27th, 1896.

"A METHOD OF EXAMINING CLUB-FEET."

To the Editors of THE LANCET.

SIRS,—Mr. A. H. Tubby's paper in THE LANCET of Jan. 18th sets out ten points to which the surgeon's attention should be directed. But none of them refer to the condition of the toes as indicating in them physiological perfection, perverted activity, or suspended or defective function. And yet, as I have long been contending, there must be some relation between the functions of the toes and more than one of the conditions mentioned. It can hardly be, for instance, that the coexistence of claw-like toes with exaggerated arch (spoken of as "arcuatus" in the paper) is a mere coincidence. The relation of the two features can, as I think, be demonstrated, but that is not my present object.

I wish to point out conditions frequently to be found in the toes which ought to be noted when existent in a methodical examination of any defective foot. The great toe may be found to have been habitually packed in the median-pointed sock or boot over or under the second toe. The difference is important. The former position is compatible with a good deal of functional activity; so far as the toe can move it does so in the natural plane of movement—from its peculiar position of rest (extension and eversion) downwards and inwards. When, however, it is packed under the second toe the position of rest cannot be assumed at all, and any movement must be in a plane for which the joint at the base is not adapted. Habitual packing in this position is absolutely incompatible with free exercise of function, and, in such a case, the plantar arch often sinks because of the suspended function of its powerful tie-rod muscle, the flexor longus pollicis. The smaller toes should each afford evidence of habitual pressure downwards, and if the final joints be not capable of free extension, so that the final phalanges lie in full length on the ground when pressed against it, this shows that the flexors act too much as flexors and not as pressors downwards of these phalanges. The point is important in relation to the corns or thickened skin beneath the heads of the metatarsal bones, to which attention is directed in the paper. When the toes are firmly held against the ground by the flexor muscles the heads of the metatarsal bones are supported, and when borne down by the weight of the body are let down gently without sliding and therefore without friction. Functionally efficient toes and callosities on the sole are never found together. Altogether, it is not too much to say that, if the physiological state of the toes be determined, the condition of the foot as a whole may be predicted.—I am, Sirs, yours faithfully,

Gloucester, Jan. 25th, 1896. T. S. ELLIS.

VOLUNTEER MEDICAL ORGANISATION.

To the Editors of THE LANCET.

SIRS,—It is much to be desired that the report drawn up by the sub-committee of the Volunteer Medical Association on this subject, a notice of which appears in THE LANCET of Jan. 25th, 1896, will be published in such form that access to it may readily be had by all who are interested in this branch of the volunteer service. To judge from the extracts which your notice contains, the sub-committee's recommendations appear to be excellent, and criticism will be directed, I imagine, rather to what the report otherwise contains. Indeed, it would appear that the sub-committee have committed themselves to a proposition which I venture to think may be disputed. In the introduction or preamble the opinion is expressed "that the existing medical organisation was good so far as it went." Now, I ask, for how many parts of the country is this a correct description of what exists? We have, it is true, regimental surgeons innumerable, with a few bearer-companies, and companies of the Volunteer Medical Staff Corps here and there, but these surely are not seriously to be regarded as constituting an "organisation." Organisation implies the power of co-ördinated action, and these certainly have meantime not that, however fitted they may be to acquire it. Indeed, the whole question would seem to lie here. Is there at the present time existing in this country any volunteer medical organisation worthy of the name? The basis of much that does exist is the regimental system, and that system in the regular army broke down most thoroughly and completely when the introduction of quick-firing guns made the rapid development of military evolutions a necessity. Why should it be retained in the volunteer service? Should "organisation," indeed, not begin by the creation of a volunteer medical staff, on the lines of the army medical staff, to include regimental surgeons, as well as the officers of bearer-companies and of companies of the volunteer medical staff corps, so that something like uniformity would at least be afforded as a basis for development? None of us who are attached to regiments would want to leave them, I should think; but all of us, I believe, would derive some support in the discharge of our duties from the knowledge that we were in addition part of a larger medical "organisation" which was something less of a fiction and more of a fact than at present.

I am, Sirs, yours faithfully,

Glasgow, Jan. 28th, 1896. ARCH. K. CHALMERS.

ROENTGEN'S RAYS AS A CURE FOR DISEASE.

To the Editors of THE LANCET.

SIRS,—Do Roentgen's rays possess germicidal properties? If so, what a vast field of treatment is laid open. We should expect that many diseases due to microbes would be curable by simple exposure to these rays. We might hope even that pulmonary phthisis could be cured by direct action upon the bacilli, for it would not be difficult to flood the apex of a lung with Roentgen's rays. Professor Marshall Hall long ago proved that sunlight was a germicide, and he found the most powerful rays in this regard were placed towards the violet end of the spectrum near those having the greatest chemical activity. Roentgen's rays are ultra-violet and possess chemical activity; by analogy we should expect that amongst them would be found some having germicidal power.

I am, Sirs, yours faithfully,

Jan. 29th, 1896. THOS. GLOVER LYON.

MUNICIPAL MEDICAL APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—Your article in THE LANCET of last week calling attention to the action of the Dunstable Town Council with regard to their medical officer is well timed. A similar incident came under my notice some little time ago. A parochial board advertised for a medical officer. The appointment was given to one of the local men, each of whom is to have his turn, the appointment being only for a year. The curious thing is that the appointment was made fully two weeks before the advertisement appeared. This I have on the authority of one of the local men. There is a great deal of "red-tapeism" connected with these appointments, and now and then the officials are made to climb down, as the following will show. Nearly a year ago a certain corporation advertised for a medical officer. Applications were received in due course, but *each* applicant shortly afterwards received notice that the appointment had been filled up. The "Final" results of a university medical examination were announced, and you may judge of the surprise of one of the rejected applicants when he received a second note stating that he had been appointed to the vacancy. The post had been

reserved for a son of a member of the corporation, but when the "Final" results appeared the young man was "out."

I am, Sirs, yours faithfully,

Jan. 28th, 1896. MEDICUS.

INJUDICIOUS FEEDING AT PUBLIC SCHOOLS.

To the Editors of THE LANCET.

SIRS,—May I be allowed to call attention to the injudicious system of feeding which is at present in force at some of our public schools? Only tea and bread and butter are provided at breakfast and tea. It may be doubted whether this is sufficient for a boy who occasionally is working hard and often playing football in all kinds of weathers. It is true that boys are allowed to provide themselves with such things as jam and tinned articles of food; the result may be readily anticipated. Boys at the age of thirteen or fourteen years are not over discreet, and as long as they have money they are liable to gorge themselves on food of doubtful wholesomeness to the exclusion of good honest bread and butter, so that when they come home it is difficult to get them to eat a breakfast unless all sorts of accessories are provided. Why cannot a daily portion of some wholesome extra be supplied, and nothing more and nothing else allowed? I venture to suggest that at the prices charged for board such a plan might well be adopted; or, if this is asking too much, let a proper charge be made—anything to avoid the wholesale introduction of these messes, which cannot but deprave the appetite if they do no further harm. The subject is important, and I hope you will consider it a fair one upon which the opinion of your readers may be elicited

I am, Sirs, yours obediently,

Jan. 13th, 1896. F.R.C.P.

THE BATTLE OF THE CLUBS.—XIX.[1]

(*Continued from p. 264.*)

THE FORMATION OF A PROVIDENT MEDICAL ASSOCIATION AT FOLKESTONE.

THE medical men of some towns on the south coast have set an excellent example to the profession in other parts of the country in their way of dealing with the urgent question of medical clubs. We have already described what has been done at Eastbourne and Bexhill, and it now becomes our pleasant duty to record that Folkestone has prepared an arrangement for meeting the requirements of the humbler class of patients without any sacrifice of the just rights or social position of individual practitioners. The rules and constitution of the Folkestone Provident Medical Association, an abstract of which is now laid before our readers, were drafted in accordance with instructions received from the Folkestone Medical Society on Dec. 4th, 1895, and were passed in their present form as a provisional scheme at the annual meeting of the society on Jan. 8th:—

RULES AND CONSTITUTION.

Object of the Association.

This Association, which has been formed with the approval of the Folkestone Medical Society, is a self-supporting society, to enable those persons living in Folkestone who cannot pay for medical attendance at the usual charges to secure for themselves and their families the advantages of medical attendance, advice, and medicine during illness.

Constitution.

The Folkestone Provident Medical Association shall be governed by a general committee and a working committee. The general committee shall consist of: (1) The entire Folkestone Medical Society; (2) the acting medical staff of the Folkestone Provident Medical Association; and (3) the honorary treasurer of the Association. The working committee shall consist of: (1) The entire acting medical staff of the Folkestone Provident Medical Association and one other member of the Folkestone Medical Society not on the acting medical staff, who shall be elected by the said society; and (2) an honorary treasurer elected by the acting medical staff. The working committee shall appoint a paid secretary, who shall not be entitled to vote at meetings, but who may be counted in the formation of a quorum. A quorum shall consist of at least three members of the acting medical staff. The working committee shall be empowered to conduct all the ordinary business incidental to the working of the Folkestone Provident Medical Association subsequent to the formation of its rules. They are not entitled to alter any of the rules now established without summoning a meeting of the general committee.

Conditions requisite for Joining Staff.

Any duly qualified and registered practitioner resident in Folkestone or the neighbourhood may become a member of the acting medical staff subject only to his appointment being approved of by the working committee. All members of the staff must undertake: (1) not to conduct clubs of their own at all, other than those of friendly societies registered under the Act; and (2) not to accept any appointment in any "medical aid (or similar) society," nor to have any professional intercourse (except in cases of extreme urgency which shall subsequently be reported to the general committee) with any medical practitioner holding any appointment in, or associating himself in any way with any of the so-called "medical aid societies," or with any similar company, so long as the methods adopted by these societies include—(*a*) The virtual sweating of their medical officer by the appropriation of the profits earned by his work; and (*b*) canvassing for members in the interests of individual practitioners.

Conditions of Membership.

Artisans and their families and others, who may be considered suitable by the working committee, shall be eligible for membership. No person can become a member who is in receipt of parochial relief. All applicants unless already members of a medical club must be in good health on joining, and must first be passed as such by one of the medical officers. Although a most desirable matter, it is very difficult in practice to adopt a hard-and-fast wage limit; and, therefore, it would appear that the best way of preventing abuse of the association by persons who are too well off will be by leaving absolute discretion in the hands of the working committee to consider the case of every applicant on its own merits. But as a general rule it may be laid down that in the case of families they shall be eligible if the combined incomes of the parents do not exceed 35*s.* a week at the rate of 1½*d.* a week for every adult—i.e., over twelve years of age—and 1*d.* a week for each child; and if the combined incomes do not exceed 25*s.* a week the charge shall be 1*d.* a week for parents and children alike. It will be expected that the whole of the family shall be entered in the lists (except in the case of those who are already members of a registered friendly society), but in large families not more than six children shall be charged for. Members joining after forty-five years of age shall be charged 2*d.* a week. The question of house rent shall also be taken into consideration by the working committee.

Servants.

Domestic servants, whose wages do not exceed £15 per annum, can be admitted as joining members by paying 2*d.* a week.

Single Persons.

Single persons shall pay at the rate of ½*d.* a week provided their income does not exceed 25*s.* a week; if over 25*s.* at the rate of 2*d.* a week; if over 30*s.* they are ineligible.

Of the paragraphs which exigencies of space compel us to omit, the most important are those providing (1) that persons in indifferent health can only join the association at special rates; (2) that members may be removed from the association if discovered to be in receipt of incomes disqualifying for membership; (3) that the fee for attendance at a confinement is one guinea; and (4) that a yearly report shall be read at the annual meeting of the Folkestone Medical Society.

At a meeting of the Sydenham District Medical Society, held on Jan. 16th, the following resolution, proposed by Dr. Bright of Forest-hill, was unanimously carried:—"That medical aid societies, as defined by the British Medical Association, are degrading to the profession and unworthy of support in any form."

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Sir Willoughby Wade.

A MEETING was held at the Medical Institute on the 17th inst. to decide upon the practical form that congratulations to the new medical knight, Sir Willoughby Wade, should take. Sir Henry Wiggin presided over a numerous and influential meeting of both lay and professional sympathisers. It was resolved to entertain Sir Willoughby Wade at a public dinner on Feb. 28th and to present him with an illuminated address. A committee was appointed to carry out the details. It is expected that a large assembly will take part in the proceedings to recognise the long services of Sir Willoughby Wade, which have earned for him such a mark of appreciation.

Health Lectures.

Under the auspices of the Midland Institute Dr. W. H. Line gave a lecture on the 10th inst. entitled "Up and Down the Ladder; or, Growth and Decay." There was a good audience. The chairman remarked that the series of lectures

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts.

given in the institute had been the cause of much attention being given to the laws of health. At the urgent request of the institute council the Science and Art Department had now included hygiene in their list of subjects, thereby ensuring its being taught throughout the country far more widely than before. It is not for lack of material that the public fail to become acquainted with the details of the laws of health. The Athletic Institute also publish a list of lectures, with the names and titles in full of the lectures, an advertisement which has brought out a criticism not unwarrantable as to the professional propriety of such a form of announcement in the public press and on the walls of various advertising stations in the town.

Midland Counties Home for Incurables.

The Earl of Warwick presided over the annual meeting of this institution on the 16th inst. at Leamington. The report stated that there had been 17 admissions during the year, and the home now contained 55 patients. The total income was £4674 13*s.* 6*d.*, and after transferring £300 to the reserve fund a balance of £270 10*s.* 2*d.* remained in hand. Allusion was made to the interest the Countess of Warwick took in the institution, and various votes of thanks were passed.

Water-closets versus Ashpits.

An appeal against an order of the magistrates to close up two ashpits and provide receptacles with waterproof covering for ashes, and to convert eight privies into water-closets on certain premises, was heard at the quarter sessions on the 21st inst. The extreme risk of the ashpits in question was proved by the medical officer of health, who stated that several cases of typhoid fever had occurred in the immediate vicinity. The arguments were ably sustained by eminent counsel, and in the end the Recorder dismissed the appeal, thus allowing the Health Committee policy of abolishing the ashpit system of sanitation to be upheld. Individual opinion, backed by tradition, has received an appropriate defeat by this proceeding.

Jan. 25th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Chamber of Commerce and River Pollution.

CHAMBERS of Commerce are supposed to consist of the most enlightened members of the mercantile community, of those who take what are called broad views of trade and manufacture, whose aims are not limited exclusively to the filling of their own pockets, but who at the same time have regard to the effects of such things as the pollution of our streams and the excessive production of manufacturing smoke on the comfort and well-being of their neighbours and on their neighbours' property. From a paragraph in the report of the Chemical and Allied Trades' Sectional Committee, which accompanies the annual report of the directors of the Chamber, it would seem that this estimate is scarcely borne out. The report says: "Regarding river pollution and smoke prevention, the committee desires it to be understood that, in its opinion, the method at present pursued by the Mersey and Irwell Joint Committee in proceeding against manufacturers for the *alleged* pollution of streams, is open to very serious objection as being prejudicial to trade and consequently to the interests of the community in general." Everyone knows that the condition of the Manchester Ship Canal is foulness itself. Pollution has for years existed unchecked from the remotest parts of the watershed of the two rivers, and in dealing with it the joint committee has had a hard task. The great complaint, heard again and again, has been that it has been too patient, too lenient. Every assistance and encouragement have been given to those who have really tried to avoid polluting the streams receiving their drainage, and now this committee of chemical experts—who might devote a little of their scientific knowledge to the cleansing, instead of to the fouling, of our streams—complains of the "drastic measures" this too forbearing joint committee "seems disposed" to adopt. It is well, no doubt, to call out before being hurt. The report goes on to contrast what it is at present pleased to call "the enlightened example of the Manchester corporation," which has, it says, by the recognition of special difficulties on the part of the manufacturers, by "the rendering of mutual assistance, and the cessation of vexatious proceedings, effected an enormous improvement in the out-turn of black smoke from the chimneys of chemical and other manufacturers." It is only a short time since the chemical manufacturers of the district were making a special moan over their peculiar difficulties as to smoke, and little was then heard about the enlightened example of the Manchester corporation. The "joint committee" has for a long time past done just what it is complained of as not doing, and if now driven to use more "drastic measures" it is because "gentle suasion" has proved useless. Only the other day a gentleman living ten or twelve miles below Manchester, and some distance from the Ship Canal, was describing to me the effect produced by one of the large ocean steamers churning up its contents, especially in summer, when the smell was so bad that his windows had to be hermetically sealed for a time. Most of the tributaries of the Irwell enter it even yet, in spite of all that has been done, foul to a degree; and when their filthy contents become impounded and almost stagnant in the Ship Canal a gigantic nuisance ensues. Improvement will gradually take place, and the true interests of trade and of the community will be advanced and not injured if the joint committee steadily persists in its beneficent action; and the Chemical and Allied Trades might benefit themselves as well as the community by using their technical knowledge in saving our streams from the pollution which this report of experts says is "alleged."

The Brand of Pauperism.

For some time past the Chorlton board of guardians has been in correspondence with the Local Government Board on two matters of some interest and importance. The Education Act of 1876 provides for the free education of the children of persons in receipt of out-door relief. To prove their attendance the children are provided with attendance cards, to be marked by the schoolmasters and mistresses, and these certificates are given in the presence of their schoolmates. As the *Manchester Courier* states in a leading article, "the effect of this is that the children are punished for the misfortune of their parents by becoming known in school as the offspring of paupers." The Chorlton board thinks that "the attendance could be ascertained by the relieving officer from the school authorities, or where there is a school board from the board, equally as well as from the attendance card, which, in effect, points out each child using the same as a pauper child." Few will blame the guardians for wishing to save these children from the brand of pauperism, which would keep them down and taint their lives. The chairman, Dr. Rhodes, said the guardians ought to resent red-tapeism, and moved a resolution, which was carried unanimously, instructing their clerk to write again asking the Local Government Board at once to issue an order doing away with the cards. It appears that the Chesterfield guardians have also moved in the same direction.

Workhouse Dietary.

As regards the next matter in dispute, the position of the Chorlton board seems, as the *Manchester Guardian* has it, "eminently reasonable." Some time ago the various unions round Manchester—i.e., Manchester, Salford, Chorlton, and Prestwich—agreed on a common system of diet for the paupers in the workhouses. But the Chorlton guardians found there was great waste of bread at dinner, the rule being that each person shall have 5 oz.—neither more nor less. Many do not care for it, some take none, others just a little with their soup or hash or whatever the food of the day may be, and leave the rest—breaking it up and throwing it aside so that it may not be served up to them again. According to workhouse regulations this is waste material, of which there has been enough when made into "swill" to feed 300 pigs on the union farm. To remedy this the guardians, with the consent of the medical officer and the Local Government Board, began, about nine months ago, a series of experiments which are yet being continued, but seem likely to be stopped "by authority." Instead of being served in a lump, the bread has been cut in slices and put on plates, so that each can take what he wants, with the result that there has been a saving of 80 lb. of bread every day. It is needless to say that the pigs are fewer. With this great saving the general workhouse diet could be, and has been, improved, with a corresponding increase of satisfaction, especially among the aged inmates. The guardians wish to make the changes permanent, but the Local Government Board objects. The dietary of the Manchester unions was arranged on the sacred principle of uniformity, which must not be

infringed, though, as one of the guardians stated, "there were truck loads of waste under the regulation dietary," which must go on because the other unions have not as yet adopted the heterodox plan of slicing the bread. It is odd, and seems one of those "ways that are dark," that while the slicing of the bread is allowed in the union schools it should be forbidden in a workhouse. The Board has declined, moreover, to receive a deputation from the guardians. The grave and placable chairman, Dr. Rhodes, was tempted, but refrained from calling the Local Government Board "an antediluvian fossil," as it had only existed sixty years; but he moved a resolution, which was carried unanimously, to the effect that the Chorlton board "did not consent to the regulation dietary," and said that if an amicable settlement were not arrived at they could go to Parliament.

Jan. 29th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Diseased Meat Case in Edinburgh.

IN the Sheriff's Court last week two butchers, one belonging to the city and another to the county, were charged with having had in their custody carcases of two cows unfit for human food, and which were carefully and skilfully dressed and intended to be disposed of for human food. The sanitary inspector stated that one of the carcases was much affected with tuberculosis, while the other was emaciated and dropsical. The Sheriff fined each of the accused £10.

Report on Edinburgh Milk Shops.

At the meeting of the Edinburgh Town Council last week a report by the medical officer of health upon the inspection of dairies and milk shops in the city for the year 1895 was submitted. Speaking generally, the report stated that the dairies were kept in a clean and sanitary condition, but that there were still milk shops of old standing which required improvement. These were being seen to by the inspector. Reference was made to the important questions as to what constitutes direct communication with dwelling houses, and as to what articles of domestic use might be stored in milk shops. These were still undecided, and as long as they were so it was held that inspection of milk shops must be regarded as imperfect.

Edinburgh Royal Dispensary.

The annual meeting of this institution was held last week, the Lord Provost presiding. The annual report showed that during the year 9505 poor persons had been treated by the officers of the institution, 2000 of them at their own homes. There had been 137 midwifery cases, and 250 cases were tabulated as influenza. The financial statement showed a balance of £60 at the credit of the dispensary.

Sir Douglas Maclagan and the Prison Commission.

It is understood that Sir Douglas Maclagan has resigned the office held by him under the Prison Commissioners for Scotland. Sir Douglas Maclagan succeeded the late Sir Robert Christison in the post of visiting physician to Perth General Prison in the year 1877, and since all the prisons in Scotland came under the charge of the Prison Commissioners he has acted as their medical adviser.

Entertainment to Edinburgh Nurses.

Last week the convener and members of the Public Health Committee of the Edinburgh town council gave an "at home" in the city chambers to the Nurses of the City Fever Hospital. They were also good enough to extend their invitation to the nurses of the Royal Infirmary, the Longmore Hospital for Incurables, the Royal Sick Children's Hospital, the Leith Hospital, and to the Jubilee Nurses. The company were received by the Lord Provost and the Convener of the Public Health Committee. The entertainment was most successful and much appreciated.

Lenzie Convalescent Home.

At the annual meeting of the subscribers on Jan. 21st it was intimated that the number of patients during the year had been 1691, and that the total ordinary expenditure for the year had been £2341 9*s.* 7*d.*, which gave a total cost per patient of £1 7*s.* 8½*d.*, the average stay per patient being sixteen days. The treasurer's report showed a deficit of £162.

Glasgow Eye Infirmary.

The seventy-second annual meeting of the contributors to the infirmary took place on the 23rd inst., Sir James King, Bart., being in the chair. The report shows an increase of 1400 patients during the past twelve months, the total number under the care of the medical officers being 18,636. Considerable attention has recently been paid to the improvement and extension of the pathological work and to the development of the museum. This department is in the hands of Dr. Leslie Buchanan. The value of the institution as a teaching centre is indicated by an increase in the number of students, the number last year being 104, including ten lady students from Queen Margaret College. The finances of the hospital are in a satisfactory state.

Hawkhead Asylum.

The extensive scheme of the Govan Lunacy Board, the total cost of which will be nearly £150,000, has now reached such a stage of advancement that the asylum proper was formally opened on the 23rd inst. The ceremony took place in the presence of a large audience containing many medical men and representatives from various public bodies. At the luncheon which followed the toast of "The Govan Lunacy Board" was proposed by Professor Gairdner. In an eloquent speech he discussed the change which has taken place in the management and treatment of lunatics, remarking that the barbarous mediæval idea that a lunatic was one possessed of a devil with its resulting horrors and cruelties had gradually been succeeded by the view, at once more humane and more scientific, that the insane were our brethren, in misfortune no doubt, but still our brethren. Dr. Gairdner congratulated the Govan Board upon their new buildings and upon the fact that they had shown themselves determined to be associated with the best intellects and efforts which were being devoted to still further promote the humane and successful treatment of the insane.

Paisley Infirmary.

It has been decided to proceed with the erection of a portion of the new building, which will provide accommodation for 108 patients, at a cost of £63,457.

Glasgow University.

The report of statistics, &c., for the session 1894-95 has just been issued. It contains a complete list of all the university officers, with their salaries and other particulars. In the medical faculty the salaries of the professors range between that paid to the professor of anatomy—viz., £1645—and that received by the professor of clinical surgery—viz., £320. It will interest many Glasgow graduates to learn that Lady Macleod has instituted a gold medal in memory of her husband, Sir George Macleod, to be awarded in the class of surgery. This will form a companion to the Gairdner medal which has been founded out of the balance of the fund raised a few years ago for the purpose of presenting Professor Gairdner with his portrait. The total number of students attending the University last session was 1944, including 211 women students.

Microbes and Plumbers' Work.

On Jan. 23rd a public meeting was held in the Waterloo Rooms, Glasgow, under the auspices of the movement for the national registration of plumbers. Bailie Crawford, chairman of the public health committee of the City of Glasgow, presided, and a lecture was delivered by Professor Glaister, M.D., on the subject of Microbes. The lecturer drew attention to the vital importance of the plumbing craft to public health, remarking that in these days the plumber is but the assistant of the physician in public health. The connexion of microbes with water cisterns, closets, and other sanitary apparatus was so close that if the plumber failed in his duty the whole fabric of public health in cities was placed in a perilous condition. But, thanks to the interest and public spiritedness of the Worshipful Company of Plumbers, and the hearty coöperation of the craft, the possibility of such danger was being daily lessened. Bailie Crawford remarked that from the point of view of the public authorities bacteriology was daily becoming more and more the guiding light to their operations, and it would be impossible for them to combat in the best manner the infectious diseases of the day, which had their origin in the various microbe organisms, without the intelligent and conscientious coöperation of the plumbers throughout the country. They now felt confident that with the education of apprentices, and with the registration of qualified journeymen, they might look forward to the future in this connexion with great confidence.

Jan. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Queen's College, Belfast.

A ROYAL WARRANT has just been received making certain changes in the statutes of Queen's College, Belfast. New scholarships are to be founded in the medical faculty corresponding with the extension of the medical course to five years. Two scholarships will now be offered for competition in each of these five years instead of two for each of the four years as formerly. Other changes refer to the Law and Arts Faculties. The new regulations will come into operation on Oct. 1st, 1896. Lady students are now eligible to compete for scholarships and prizes.

Health Lectures at Queen's College, Belfast.

On Jan. 22nd Professor Thompson concluded the annual series of free lectures in connexion with the Dunville Chair of Physiology, his subject being "The Nature of some Common Chest Affections." At the close of the lecture a vote of thanks was passed to the Dunville family as well as to Professor Thompson, who is the Dunville Professor of Physiology.

The Belfast Hospital for Sick Children.

At the annual meeting of the supporters of this hospital, held on Jan. 24th, it was reported that during the past year there were 10,452 extern and 285 intern cases. A number of students are attending the hospital cliniques. The ordinary receipts last year were £1154 11*s.* 7*d.*, and the expenditure £1560; the cash balance in the bank at the end of the year was £332. Owing to the increasing work in the extern department two new officers—an assistant physician and an assistant surgeon—were appointed during the year.

Downpatrick Infirmary.

The report for the year ending Dec. 31st, 1895, shows that the total expenditure was £1476 15*s.* 7*d.* There were 492 cases admitted. The average number of beds daily occupied was 398, and the average cost of each patient was £2 13*s.* 8½*d.* The number of extern patients recommended for advice was 701. The treasurer has a balance of £22 1*s.* 2*d.* after payment of all accounts.

The Samaritan Hospital, Belfast.

At the annual meeting of this hospital, held on Jan. 27th, it was reported that during 1895 there were 559 extern patients and 142 intern, the majority of whom required surgical treatment. There were 108 operations performed, of which fifteen were abdominal. Only three deaths occurred in the hospital during the year. The amount received from subscriptions during 1895 was £128, and in contributions from intern patients £298. A new wing is urgently required for the reception of cancerous cases. Dr. St. Clair Boyd, one of the members of the staff, was re-elected surgeon to the hospital.

The Athlone Union.

This union has acquired a certain celebrity on account of the refusal of the board of guardians to accede to the request of the Local Government Board in reference to the appointment of a trained nurse in the place of an untrained one. The board was, as will be remembered, dismissed by sealed order and two paid commissioners were appointed in their stead. The post of clerk to the union became vacant recently, and after an election which caused much interest Mr. Joseph S. Vaughan, LL.D., son of the late clerk, was chosen from among twenty-two candidates.

The Richmond District Lunatic Asylum.

His Excellency the Lord Lieutenant has appointed Dr John Eustace, J.P., to be a governor of the above asylum. Dr. Eustace has long been recognised as an authority on lunacy in Ireland.

Death of Mr. William Robert Graves.

Mr. Graves, whose death took place on Jan. 24th, was well known in Dublin as an accomplished pathologist and physician. He was for many years a member of the staff of the City of Dublin Hospital, and a valued contributor to the Transactions of the Academy of Medicine in Ireland, of which society he was a Fellow. His death at the comparatively early age of forty-five years is much deplored.

The Direct Representative for Ireland.

Mr. S. W. Wilson, L.R.C.P.I., ex-librarian of the Royal College of Physicians of Ireland, has recently been appointed Registrar of the Branch Medical Council for Ireland in the room of Dr. R. L. Heard, resigned. He will carry out the arrangements for filling the vacant place on the General Medical Council for a direct representative from Ireland, and will announce the result of the election on March 2nd. The nomination of candidates will take place on Feb. 15th, and the voting, which will commence on Feb. 20th, will continue for seven days. Dr. William Thomson and Dr. Jacob divide the Dublin votes, but the three provincial candidates have promptly decided to adopt the course suggested by the profession in Cork with regard to taking a preliminary poll of the constituency for the purpose of deciding which of the three shall be selected as the provincial candidate. They have also asked their colleagues in Cork to take the necessary steps for sending out the voting papers and generally regulating and superintending the preliminary contest. Accordingly, a meeting was held in Cork on Jan. 25th, and it was unanimously decided that the request of the candidates should be acceded to. The readiness with which the three candidates waived all personal considerations cannot fail to have considerable influence in organising the provincial vote when the final contest comes to be fought out.

Jan. 28th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Population Statistics of France for the Year 1894.

THE above-mentioned statistics have just been issued by the *Office du Travail*. From this document I gather that during 1894 there were registered 286,662 marriages, 6419 divorces, 855,388 births, and 815,620 deaths. Compared with 1893 we find a diminution (for 1894) of 632 marriages, 19,284 births, and 51,906 deaths, whereas divorces have increased by 235. The salient point in these figures is—putting aside the feeble diminution (0·2 per cent.) in the marriages and the increase (3·9 per cent.) in the divorces—the backward movement (2·2 per cent.) in the births and a compensatory, but more marked, diminution (6 per cent.) in the deaths. The excess of births over deaths, which in 1893 was 7146, only attained in 1894, despite the fewer births and thanks to the fewer deaths, to 39,768. The following table shows at a glance the annual oscillations of the population since the year 1881:—

Years.	Marriages.	Divorces.	Births.	Deaths.
1881	282,079	—	937,057	828,828
1882	281,060	—	935,566	838,539
1883	284,519	—	937,944	841,141
1884	289,555	1657	937,758	858,784
1885	283,170	4277	924,558	836,897
1886	283,208	2950	912,838	860,222
1887	277,060	3636	899,333	842,797
1888	276,848	4708	882,639	837,867
1889	272,934	4786	880,579	794,933
1890	269,332	5457	838,059	876,505
1891	289,458	5752	866,377	876,882
1892	290,319	5772	855,847	875,888
1893	287,394	6184	874,672	867,526
1894	286,662	6419	855,388	815,620

We thus see that from 1881 to 1889 the births were more numerous than the deaths, the reverse being the case during the years 1890, 1891, and 1892. Since 1892 the births have reassumed their preponderance; but we perceive that whereas the births in 1894 were substantially fewer than during the three preceding years (only once, indeed, have the birth figures fallen so low—viz., in 1890), the increase in the population is really due to decreased mortality. Divorce, which was revived on July 27th, 1884, by M. Naquet, the late General Boulanger's henchman and a distinguished chemist, being strenuously opposed by the Roman Catholic Church, is least prevalent where the Church is strongest and *vice-versâ*. Hence, whereas in the Department of the Seine 51 per 100,000 inhabitants, or, in other words, 258 out of 100,000 households, were divorced, we find in the Lozère only

136 per 100,000 households. Divorce is the most unpopular in Brittany, Berri, the Pyrénées, Savoy, and Auvergne. The general natality for the whole of France is low—viz., 22·5 per 1000 inhabitants, and 3 births per marriage, the extremes being, in the Gers 14·5 per 1000, and 32·6 per 1000 in Finistère. In the south of France illegitimate births are few in number, whilst in the north (principally in the Pas-de-Calais, the Somme, the Seine Inférieure, the Eure, Calvados, and especially in Paris) they are considerable and fairly constant. Thus, in 1894 there were 778,937 legitimate as against 76.451 illegitimate births, the corresponding figures for 1893 being 808,110 and 76,562. The general mortality for 1894 was 21 per 1000, the extremes being the Allier (15 per 1000) and the Bouches-du-Rhône (26·9 per 1000). Still-born children numbered 42,046 (24,543 males to 17,503 females)—a fairly constant figure since 1881. The fall in the birth-rate leaves thinking Frenchmen as anxious as ever for the national future, and fully justifies the prophecy that this great country will, say 100 years hence, be relegated to the position of a second- or third-rate Power.

Health of Paris.

The appended table shows the deaths from infectious diseases that occurred in Paris from 1890 to the end of 1895. The deaths of inhabitants of the suburbs situated outside the fortifications who succumbed in the Paris hospitals are not counted :—

—	Typhoid fever.	Small-pox.	Measles.	Scarlet fever.	Whooping-cough.	Diphtheria.
Total, 1895 ...	271	17	679	178	419	435
„ 1894 ...	697	166	993	151	255	1009
„ 1893 ...	570	260	677	177	508	1266
„ 1892 ...	691	42	909	158	334	1403
„ 1891 ...	476	39	983	202	332	1361
„ 1890 ...	656	76	1495	223	491	1668
Yearly average, 1880-89	1598	544	1188	236	433	1840

The very marked decrease in the death-rate from infectious diseases in general cannot fail to strike the reader. London itself cannot show such an improved record as regards typhoid fever. The diphtheria figures are also most reassuring, the death-rate having fallen from 1840 (average of ten years) to 435—less than a quarter. This speaks volumes for the efficacy of the new antitoxin treatment.

Parisian Medical Journals.

In the course of a single twelvemonth no fewer than 22 periodicals having reference to the science and art of medicine have been added to the already ample supply produced in Paris. In 1894 the number published was 177, but by the end of 1895 the portentous list had been lengthened to 199.

Protection as applied to the Practice of Medicine in France.

My remarks on the above subject in last week's issue of THE LANCET are corroborated by the appended resolutions passed by the medical section of the Students' Association of Paris. I quote from *La Presse Médicale*, and refrain from supplying a translation.

"Les étudiants en médecine, membres de l'Association générale des étudiants de Paris, réunis pour discuter les mesures à prendre à l'égard des étudiants étrangers, se sont arrêtés aux dispositions suivantes :

"1. Les étudiants étrangers, avant de prendre leur première inscription, devront présenter un certificat d'études supérieures obtenu après examen devant un jury composé de professeurs d'une Faculté française.

"2. Au moment de s'inscrire à la préfecture du département où ils ont l'intention d'exercer, les docteurs en médecine devront déposer :

"(*a*) Les pièces établissant leur qualité de Français ;

"(*b*) Le diplôme français de docteur en médecine ;

"(*c*) Tous les diplômes exigés des étudiants français au moment de la prise de leur première inscription.

"Aucune exception aux dispositions précédentes ne sera admise.

"Sur la question de l'entrée des étrangers dans les Facultés françaises, nous avons pensé que l'équivalence accordée dans les conditions actuelles était une garantie insuffisante d'études supérieures et que, d'autre part, il serait exagéré d'exiger des étrangers les diplômes demandés aux étudiants français.

"Sur la question de l'exercice de la médecine, nous estimons juste de soumettre les étrangers aux mêmes exigences que les docteurs français. Ils devront, au moment de s'établir, avoir obtenu la naturalisation qu'il est impossible de leur imposer au moment où ils commencent leurs études, étant données les conditions exigées par la loi du 26 juin 1889 sur la naturalisation (la naturalisation peut être accordée: (1) après trois ans de domicile autorisé ; ..... (4) aux étrangers qui justifient qu'ils résident en France depuis dix années sans interruption).

"Nous avons réservé la question des concours qui relève uniquement de l'Assistance publique de Paris, des municipalités ou d'administrations diverses."

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Recent Discovery in Photography.

PROFESSOR ROENTGEN'S discovery continues to interest scientific circles and the general public in an extraordinary degree. Popular lectures and demonstrations on the subject are held here every evening in the overcrowded amphitheatre of the "Urania," a society for promoting a general knowledge of natural science, and all the tickets are already taken for the next meetings. Surgeons have begun to make practical use of the discovery. In one of your correspondent's cases, for instance, a finger which had sustained a compound fracture and from which a sequestrum had been removed was photographed by the new process, and the regeneration of the bone was thereby made visible. In another case the position of a piece of glass embedded in the tissues was ascertained by the same method. Similar reports come from other universities, as, for instance, from Berne, where Professor Kocher has photographed a needle in a woman's hand ; it had made its way under the skin some time ago and had not been found by any other means. Professor Roentgen came to Berlin last week, at the invitation of the Emperor, in order to show his discovery, and he was expected to speak at a scientific meeting, but he left the city on the following day.

The Antitoxin Treatment of Diphtheria.

The Imperial Health Office has issued a statistical report on the use of diphtheria antitoxin in the hospitals from April to June, 1895; 2130 cases were reported, of which 1812 (= 85·1 per cent.) recovered and 306 (= 14·3 per cent.) died ; 23 of the latter died within the first twelve hours ; as they had come to the hospital in the final stage of the illness they are to be excluded from calculation, and the mortality is to be reckoned on the basis of 283 deaths (= 13·3 per cent.). In the first quarter of the year the numbers were 17·3 and 16·7 per cent. respectively ; 710 cases are reported as being mild, and of these only 1 died ; 293 cases are said to have been of moderate intensity and 1021 cases, of which 290 died, were severe. Of 106 patients with 13 deaths no particulars were given. As regards age, the report states that 41 patients were children under one year, of whom 17 died, giving a mortality of 41·5 per cent.; 218 were from one to two years of age, with 80 deaths (= 36·7 per cent.). The death-rate decreases as the age of the patients increases. Those of three years have a mortality of 17·1 per cent., those of seven years one of 8·2 per cent., and those of fifteen years one of 5·2 per cent. The injection of the serum was performed on the first two days of the illness in 752 patients, of whom only 48 died, giving a mortality of 6·4 per cent. This is a much smaller death-rate than in the first quarter of the year. The improvement is due, according to the report, to the greater strength of the preparation which is now in use (1000 units instead of 650). The injections performed on the third day were followed by a mortality of 10 per cent., those on the fourth day by a mortality of 17·3 per cent., those on the fifth day by a mortality of 23·5 per cent., those from the sixth to the tenth day by a mortality of 28·3 per cent., and those from the eleventh to the nineteenth day by a mortality of 17·6 per cent. 841 patients suffered from laryngeal diphtheria ; 588 of them were operated on and 176 died (= a mortality of 29·9 per cent.). Some secondary effects of the antitoxin are reported, including skin eruptions, pains in the joints, and suppuration at the place of injection. The result of collective investigation in the hospitals during the second quarter of the year is, therefore, that antitoxin has an obviously favourable influence on the disease, whilst the accidental effects are of no importance.

Treatment of Prostatic Enlargement.

Castration for hypertrophy of the prostate has been recommended and successfully performed by Dr. White of Philadelphia, who found that this operation was followed by a diminution of the gland and a decrease of pain. Dr. White's method is less dangerous than the direct removal of the

gland by suprapubic prostatectomy, but as the duration of the operation is rather long and as narcosis is necessary it is not without risk to elderly patients. Professor Helferich of Greifswald has now adopted an operation for the same purpose, which may be performed without an anæsthetic. He does not remove the testicles, but only makes a resection of both the vasa deferentia. An incision of 1½ centimetres (= 0·6 inch) in length is made in the scrotum and the spermatic cord. The vas deferens is then isolated, its lower end is torn away from the epididymis, whilst the upper end is cut through as high as possible, and the little wound is sutured and covered with collodion. The operation is finished in a few minutes and the patient is not confined to bed. In the majority of cases the difficulty of micturition disappeared after the operation and the patients felt relieved, even though the prostate gland did not actually decrease in size. Professor Helferich is of opinion that the success in these latter cases depends on nervous influence.

Foreign Students in German Universities.

During the last half-year 2287 foreign students attended the German Universities, being 8 per cent. of the total number of students. They were distributed as follows: 540 in Berlin, 388 in Munich, 301 in Leipzig, 189 in Heidelberg, 143 in Halle, 94 in Freiburg, 84 in Strassburg, 83 in Jena, 65 in Göttingen, 56 in Würzburg, 52 in Bonn, 46 in Königsberg, 46 in Marburg, 29 in Erlangen, 27 in Greifswald, 25 in Breslau, 21 in Tübingen, 10 in Kiel, 9 in Münster, 7 in Rostock, and 2 in Giessen; 1697 came from various European countries, and 590 from other countries, principally from the United States of America. In reality, however, the foreign students are much more numerous than the official register shows, because many of them attend the lectures and private courses without being regularly matriculated at a university. Many foreigners attend the post-graduate courses held at the great universities during the vacations, making only a short stay for this purpose, and they are, therefore, not entered on the records of the university registrars. Many foreign medical men take the diploma of M.D. in this country.

Jan. 27th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

International Congress for the Protection of Infancy.

THE last International Congress for the Protection of Infancy was held in August, 1895, at Bordeaux, and its proceedings were memorable for the revelations contributed by delegates of all the European Powers as to the frightful sacrifices of child-life, physically and morally, for which the closing decades of the nineteenth century are responsible. In no country is that sacrifice so great—so tragic, I might say—as in Italy, where the parental obligation has, from one cause or another, become so dead as to admit of the sale of children of tender years to itinerant "impresari," the parents well knowing to what a fate they are consigning their own flesh and blood. The traffic is worse than that of the slave-dealer. He buys or sells human beings of alien progeniture, whereas the Calabrian or Sicilian father and mother make merchandise of their own offspring. Again, as THE LANCET has shown, the protection of child-life in Italy against employment in factories for which it is neither physically nor morally adapted is shamefully inadequate, the law which prohibits such employment being so much more "honoured in the breach than in the observance" that, in the language of Signor de Andreis, "gli stessi giudici stupiscono quando alcuno ha la strana idea di invocarla" (the judges themselves are astonished when anyone has the strange idea of invoking it). The effects of this abuse of infancy are seen in many ways—in the conscription, for example, where, according to a Milanese writer, "45 per cent. of our youth cannot complete their military service for physical decrepitude and the maladies it invites." With special propriety, therefore, Italy will be the scene of the next International Congress for the Protection of Infancy, the place of meeting being Florence and the time October next. An organising committee, under the presidency of Baron Scander Levi, has already announced its programme, which includes "importanti materie riguardanti il miglioramento fisico, morale e intellettuale dei fanciulli ed i mezzi per raggiungerne i diversi scopi" (important matters relating to the amelioration, physical, moral, and intellectual, of children, and the means best adapted to obtain the ends in view). Hygiene, education, philanthropy in all its phases will be represented at the Congress, some of the most distinguished heads of sanitary institutions, children's hospitals, houses of correction, and infantile asylums having announced their intention of assisting, or, even thus early, having sent in their contributions. Great Britain, France, Germany, and Austria-Hungary will each have their delegates, while as to Italy I can already announce the names of such "Congressisti" as the Senator Giacomo Costa, President of the National Association for the Protection of Infancy; Dr. Pio Blasi, Secretary-General of the said association; and Dr. Bosco, Statistical Secretary in the Ministry of Agriculture and Commerce. The Congress will be the first of the kind ever held in the Italian kingdom, and vigorous as well as liberally inspired efforts are already on foot to make it the success which its all-important subject so deservedly merits. Further details as to membership, the order of business, and the facilities provided for the conveyance and lodgment of delegates and visitors I reserve for another opportunity.

Jan. 25th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Russian Conference on Syphilis.

THE special commission, which was appointed to organise the conference upon syphilis in Russia to be held next December, has already begun to hold its meetings, and for the present these will be continued twice monthly. The commission is under the presidency of Dr. Ragozin, Director of the Medical Department, and contains among its members Professor Petersen, Dr. Hertzenstein, Dr. Gratzianski, Dr. Tchistiakof, Dr. Vvedenski, and others. The Moscow Venerological Society has chosen for its representative Dr. Krakht; and Professor Ghé, of the University of Kazan, who is at present in St. Petersburg, is also taking part in the sittings. At present these are occupied mainly with the collection of historical records of syphilis in Russia, and a general consideration of measures taken in the past to control the disease.

The Library of the Medical Academy in St. Petersburg.

A new division of the library of the Army Medical Academy has just been opened. It is in some respects a new departure in medical libraries, for it will contain not only books on professional subjects, but also works of general literature, "*belles lettres* and the arts," provided their writers have at some time been connected with the Academy either as pupils or upon the teaching staff. For it is to such works alone that the newly opened division of the library is to be devoted. The general library of the Academy is already an extensive one containing 98,500 works in 136,500 volumes. The Russian medical journals and reports of medical societies taken by the Academy number 140, and more than 400 foreign periodical publications are also received.

An Undescribed Skin Affection.

Dr. K. G. Samson, writing to a recent number of the *Vratch* (1895, No. 48), described a form of skin affection which, though not of very rare occurrence in certain parts of Russia, is not mentioned in any text-books of dermatology. The malady in question appears, indeed, to have escaped description in medical literature generally. Dr. Samson has, however, met with several cases during the last two years, particularly in the autumn, occurring in the easterly government of Ufa, close to the Ural Mountains; and Dr. Sokolof, in a later communication to the same journal (No. 52), states that he has met with at least two or three instances of the disease every summer since the year 1881 in the governments upon the River Volga, and that his fellow practitioners in the country whom he has questioned upon the subject are quite familiar with it. The disease appears, in the form of one or more thin red lines, slightly raised above the surface, and looking like fine red threads. They occur usually on the face, but have been met with on the neck and forearm, but not on parts of the body usually protected by clothing. The thin red line grows sometimes 15 cm. in one day; at first it is straight, but later becomes bent on itself. It may disappear from the face and reappear on the mucous membrane of the mouth or nose or on the conjunctiva (this is denied by Dr. Sokolof). The only subjective

symptom is intense itching. The cause of the complaint is found in a small parasite about 1 mm. long, consisting of ten segments; the mouth is surrounded by comparatively large hooklets, and is armed with what appears to be two suckers. Each segment is outlined by a fringe of small hooklets or projections. At the anal end are two large projections. By transmitted light two transversely striped tubes and other internal organs are seen. A fuller description of the parasite is promised later. In addition to the full-grown parasite, which, it should be stated, is not found in the thin red lines, but about ½ cm. from their ends in the still healthy skin, Dr. Sokolof has been able to find in every case at a distance of about two fingers' breadth from the end of the red line a number of small black nits or eggs. These are very firmly adherent to the fine hairs of the skin or to the eyebrows or eyelashes. The worm appears to escape from the bottom of the eggs, which are always found empty. It is suggested that the eggs are laid by some kind of fly, of which the worm is the larval form. The eggs have been found in patients seeking treatment for some other complaint and bearing no signs of the buried larvæ.

The Changes in the M.D. Degree.

The scheme of proposed changes in the Russian degree of Doctor of Medicine, already described in THE LANCET, has not yet become law. The Medical Council after reconsidering it have again returned it to the Medical Department of the Ministry of the Interior, and it will probably be submitted in the spring to the Imperial Council of Ministers.

Cholera in St. Petersburg.

With slight variations from week to week the cholera remains almost stationary in St. Petersburg. In the week ending Dec. 23rd (Jan. 4th) there were reported in the capital 28 cases of cholera and 19 deaths, in the following week 50 cases with 21 deaths, and in the week ending Jan. 5th (17th) 35 cases with 13 deaths. On the last-named date there remained 35 cholera patients under treatment. Between the 5th (17th) and 12th (24th) of January there were 16 fresh cases of cholera and 6 deaths. At noon on the 12th 18 cholera patients remained in hospital.

Jan. 15th (27th), 1896.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera News.

DURING the last fortnight there have been thirty-two new cases with twenty-seven deaths in Lower Egypt, but during the last three days only one case has been discovered. Since Jan. 6th Alexandria has furnished nine cases and nine deaths, all among the poorest natives. One of the last cases was that of a beggar who lived chiefly on cannabis indica, and had no home and no means of subsistence, living on the charity of those who frequented hasheesh dens and the prostitutes' quarter. Cairo also has furnished one case, the importation of which is difficult to prove. The man was an ex-railway employé and was transferred, pending bacteriological research, to the infectious hospital at Abbassiyeh, where he died. The total number of cases has now reached 1148, and the total deaths are 955.

Cairo, Jan. 22nd.

Obituary.

JOHN STRAHAN, M.D. R.U.I.

IT is with sincere regret that we announce the death of one of the most able and promising Belfast physicians, Dr. John Strahan, which took place in that city on Jan. 23rd from pneumonia, a disease very prevalent in Belfast at present. Dr. Strahan, a member of a family distinguished for their scholastic attainments, was the son of a Belfast man, and was educated at the Royal Academical Institution and afterwards at Queen's College, where he had a very distinguished career. In 1872, he graduated M.D. with honours in the Queen's University. He then for a time was resident surgeon in the Belfast Union Infirmary and Fever Hospital, assistant surgeon to the Aughnacloy Fever Hospital, and afterwards surgeon on the "White Star" line of transatlantic steamers. He then settled down in Belfast, where for a time he held a dispensary appointment, which he subsequently resigned in order to devote himself to private practice. Dr. Strahan, who was just forty-four years of age at the time of his death, was a man of very great abilities and thorough knowledge of his profession, and extremely popular with his medical brethren and with his patients. He was a frequent contributor to medical literature. In 1886 he was awarded the Fothergill gold medal by the Medical Society of London for an essay on the Nature of Fevers Usually Termed in this Country Febricula; Simple, Combined, and Modified Typhoid. In 1889 the College of Physicians of Philadelphia gave him the Jenks Memorial Prize for a *brochure* on the Diagnosis and Treatment of Extra-uterine Pregnancy, and in 1892 he obtained the Warren Prize, Boston, for an Essay on Rickets. Dr. Strahan was a very popular lecturer, and his services were much sought by many of the societies in Belfast, where his addresses on medical subjects were greatly appreciated. Dr. Strahan was unmarried, and, as we have said, he was a member of a very able family; one of his brothers is Professor of English Law in Queen's College, Belfast, another (Dr. S. A. K. Strahan) is a distinguished alienist and barrister, while a third is a leading solicitor in the city of Belfast. Dr. Strahan's early death is much deplored by a very large circle of friends. The funeral took place on Jan. 25th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Kuchin, Emeritus Professor of Histology and Embryology in the University of Warsaw.—Dr. Labric, Honorary Physician to the Hospitals of Paris.—Dr. Fienga, *privat-docent* in Physiology in Naples.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr. Straub has been promoted to the Ordinary Professorship of Ophthalmology.—*Bahia:* Dr. F. B. Pareira has been promoted to the Professorship of Clinical Medicine.—*Berlin:* Dr. Stadelmann, formerly of Dorpat, has been recognised as *privat-docent* in Internal Medicine.—*Berne:* Dr. Leon Ascher has been recognised as *privat-docent* in Physiology.—*Brussels:* Dr. Lavisé has been appointed Professor *agrégé* of Surgery and Dr. Houzé Professor *agrégé* of Anthropology.—*Königsberg:* Dr. Eiselsberg of Utrecht has been appointed to the chair of Clinical Surgery.—*Leipzig:* Dr. Jarisch of Vienna has been appointed Director of the new Dermatological Clinic.—*Rome:* Dr. Semo has been recognised as *privat-docent* in Medical Pathology.—*Rostock:* Dr. Körner has declined the invitation to Heidelberg as Extraordinary Professor of Ear and Throat Diseases.

FARNHAM AND AN INFECTIOUS HOSPITAL.—A proposal to establish an infectious isolation hospital to be used by authorities jointly in the neighbourhood of Farnham has been discussed for a long period, but the committee originally appointed have met with many difficulties, chiefly from the secession of one public body after another from the scheme which was propounded. A weighty report which was presented to the Farnham urban council recently, however, seems likely to revive interest. The death-rate, Mr. S. G. Sloman, jun., reported, had not been heavy for December, but there had been several cases of infectious disease, chiefly scarlet fever, and some of them had been removed to the workhouse isolation wards. One, however, was not able to be removed because there was not a single vacant bed, and he asked the council to consider the danger which would arise from, say, an epidemic of diphtheria if this be the normal condition. In addition to this Mr. Sloman condemned as "disgraceful" a cottage where two cases of fever occurred; it was, he said, impossible to isolate, and a husband, wife, and five children occupied a house unfit for human habitation. There is much opposition to a hospital for the Farnham district only, and on the assurance that the joint committee had the matter in hand the discussion was adjourned.

AN INFECTIOUS HOSPITAL FOR THORNBURY AND DISTRICT.—On the recommendation of the medical officer of health for Gloucestershire the Thornbury guardians have decided to erect an isolation hospital to contain twenty beds. It was stated that the outbreak of small-pox in the workhouse a few years ago cost about £700.

LITERARY INTELLIGENCE. — Messrs. Oliphant, Anderson, and Ferrier will shortly issue a series of biographies at a popular price, dealing with great names connected with art, history, and literature in Scotland. In an early volume will be found a life of Sir James Y. Simpson, by Eve Blantyre Simpson. Thomas Carlyle and Hugh Miller will also find a place among the earlier issues.

INSTITUTE OF CHEMISTRY.—At the examination for admission to the membership of this institute, held from Jan. 7th to 10th, the following candidates were successful: G. H. Appleyard, Yorkshire College, Leeds; J. H. Coste, Finsbury Technical College; G. George, Merchant Venturers' Technical College, Bristol; F. Hudson-Cox, School of the Pharmaceutical Society and University College, London; P. C. H. Hunt, Mason College, Birmingham; and E. J. Parry, B.Sc. Lond., Guy's Hospital.

MEDICAL MAGISTRATES.—Dr. John Fletcher Horne and Mr. M. C. S. Halton, L.R.C.P. Irel., have been placed on the Commission of the Peace for the Borough of Barnsley.—Mr. Ernest Black, L.R.C.P., L.R.C.S. Edin., of Broome, West Australia, has been appointed resident magistrate for the district of Esperance, Western Australia, and Mr. Fred. M. House, L.R.C.P. Lond., M.R.C.S., of Katauning, West Australia, has been appointed resident magistrate for the West Kimberley District, Western Australia.

CITY OF BIRMINGHAM LUNATIC ASYLUMS: ANNUAL REPORT, 1895.—Mr. Whitcombe, in noting an exceptionally large admission of cases of melancholia and of actively suicidal patients, makes some important observations regarding certain social factors which undeniably influence the production of mental disease. He lays special stress on the evils associated with the present system of "cramming" in education, the forcing of brains, irrespectively of capacity, to attain certain levels. He also alludes to the domestic misery resulting from ill-assorted marriages and the mental stress in old age where, either from inability or improvidence, no provision has been made for this period. In twenty-seven males and twenty-four females intemperance is given as the exciting cause of insanity. The superintendent remarks that this is a most unusual number of females, and that he has never before noticed such a close approximation of the sexes under this head. In proportion the deaths were considerably more at Winson-green than Rubery-hill, but this only affords additional proof of the enhanced mortality appertaining to acute mental disease. Altogether this is an instructive and valuable report.

THE SOUTHAMPTON COUNCIL AND THE CORONER.—A complaint was made a week or two ago to the Southampton Council of the enforced removal by the coroner (Mr. Coxwell) of bodies on which an inquest was to be held to the public mortuary, and the town clerk wrote to the gentleman asking his authority for such a course. Mr. Coxwell said he did it "on the authority of the Public Health Act, custom, and common law." The town clerk replied that the only section of the Act named which referred to the matter was Section 143, and the latter part had been repealed by the Coroners' Act, 1877. The matter was then handed over to the secretary of the Coroners' Society, and the town clerk has submitted the following grounds of complaint: (1) That the corporation objects to the coroner ordering the removal of bodies from private dwelling-houses to the mortuary as a matter of convenience to coroner and juries, and denies the existence of his power to make or enforce such orders; (2) the public mortuary is provided *primâ facie* for the bodies of persons found dead and unclaimed; (3) that the Public Health Act, Section 142, only provides for the removal of a body on a justices' order where the dead has died of an infectious disease and the body is retained in a room in which persons live and sleep, or is in such a state as to endanger the inmates of the house; (4) with regard to post-mortem examinations, Section 13 of the same Act clearly provides that the place provided must be otherwise than at (*inter alia*) a mortuary; and (5) that the corporation has interfered as representing the ratepayers and inhabitants in consequence of complaints made to them upon the subject.

CHELMSFORD INFIRMARY AND DISPENSARY.—The annual meeting of the subscribers to the Chelmsford Infirmary and Dispensary was held on Jan. 22nd, the Mayor presiding. The report showed that 172 patients had been treated in the infirmary, and that 1638 had attended at the dispensary. Additional accommodation was required and plans for four extra wards were submitted. The honorary medical officers were each voted 25 guineas.

A NEW STREET-CLEANING MACHINE.—Mr. Jesson of Bristol has invented a new machine for street cleaning. The machine combines several services. It is designed to sweep the streets and at the same time to water and collect the refuse and to deposit, by its own action, the refuse in ordinary collecting carts. The machine is arranged so as to be easily attached to a low-built collecting cart, and when the cart is full it can be detached and placed at the back of another. The inventor undertakes to prevent the spreading of dust in the atmosphere.

SUNDERLAND BOROUGH ASYLUM: INTERIM REPORT, NOVEMBER, 1895.—This new asylum, when complete, will hold 500 inmates. At present accommodation is provided for 350 patients, and includes special wards for the sick, infirm, epileptic, and acute cases. Patients began to arrive on May 21st, 1895, and 307 have been under treatment. Some anxiety has been caused by water percolating into the basements, and giving rise to an insanitary condition of the subways. On the first reception of the patients this state of matters seems to have been attended by a mild outbreak of erysipelas; four cases occurred.

THE SMALL-POX EPIDEMIC AT GLOUCESTER.—At the last meeting of the Gloucester Board of Guardians a vote of thanks was recorded to the twenty-two members of the profession who had written to the guardians recommending *inter alia* that the Vaccination Acts should be enforced. It was resolved that the decision arrived at at the previous meeting, earnestly recommending the parents of unvaccinated children to obtain their immediate vaccination, be confirmed. Dr. Craddock, the medical superintendent of the County Lunatic Asylum, wrote to the guardians stating that no more patients would be received from the city in consequence of the outbreak of small-pox. Dr. Bibby, public vaccinator for Gloucester, vaccinated 200 persons during the past week.

MIDDLESBROUGH FEVER HOSPITAL.—At a recent meeting of the managing committee of the Middlesborough Fever Hospital Dr. Malcomson presented a report for the year 1895, showing that 738 patients had been admitted, 615 had been discharged, 38 had died, and 109 remained on Dec. 31st. The cases admitted were made up of 627 of scarlet fever, 105 of enteric fever, 2 of small-pox, 2 of influenza, 1 of diphtheria, and 1 doubtful. The average daily number of patients throughout the year was 73, but during the last six months it was much higher than that, and the work had been carried on under difficulties as the wards were intended to receive sixty-four beds only. During the subsequent discussion it was stated that convalescent children were put two in one bed, and that sometimes three infants occupied one large bed. It was decided that Dr. Malcomson should report as to what additions to the hospital were necessary. A motion for the appointment of a medical officer who should give his whole time to the hospital was negatived.

NEW INFECTIOUS HOSPITALS FOR LEEDS.—In 1892 the Leeds corporation acquired an estate of ninety-seven acres at Manston for the purpose of erecting thereon isolation hospitals for fevers and small-pox, and not long afterwards were forced, by an unexpected prevalence of small-pox, to provide accommodation on this site for cases of that disease. Before sanctioning the designs for the new permanent buildings the Local Government Board directed that there should be ample separation between the fever and small-pox departments and that the hospital should not be erected in a position which has more than 120 houses within a radius of half a mile. In the plans as now finally approved no building will be placed within 40 ft. of the boundary fence. One small-pox pavilion has been constructed, consisting of two wards, each with accommodation for fourteen patients, and measuring 91 ft. long, 25 ft. wide, and about 13 ft. high. Another similar pavilion for small-pox will be erected shortly, making a total of fifty-eight beds for that disease. Four pavilions of smaller size will be built for other infectious fevers, and a fifth for the isolation of doubtful cases.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARBER, GEO. W., L.R.C.P. Lond., M.R.C.S., has been appointed Health Officer at Kalpoorlie, Western Australia.

BLACK, ERNEST, L.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Officer for the Esperance District and Public Vaccinator for the Urban, Suburban, and Rural Districts of Esperance, Western Australia.

BRIGGS, HENRY, M.B., C.M. Edin., F.R.C.S. Eng., has been reappointed Honorary Surgeon to the Liverpool Hospital for Women.

BURTON, J. E., L.R.C.P. Lond., M.R.C.S., L.F.P.S. Glasg., has been reappointed Honorary Surgeon to the Liverpool Hospital for Women.

CAMERON, A. G. R., M.B., B.S., M.R.C.S., L.R.C.P., D.P.H. Camb., has been appointed Assistant Medical Officer to the Small-pox Hospital Ships, Metropolitan Asylums Board.

CAREY, CHAS., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer, Bromsgrove Cottage Hospital.

CAROLAN, JAS. F., M.R.C.S. Eng., has been appointed a Public Vaccinator for the Districts of Kawa Kawa and Bay of Islands, New Zealand.

COWEN, ALFRED, M.B. Melb., B.S., has been appointed a Public Vaccinator at Steiglitz, Victoria, Australia.

CRAWFURD, RAYMOND H. P., M.A., M.D. Oxon., M.R.C.P., has been appointed Assistant Physician to the Royal Free Hospital, Gray's-inn-road.

DAVIES, B. T., M.D. Edin., C.M., F.R.C.S., L.R.C.P. Lond., has been reappointed Honorary Assistant Medical Officer to the Liverpool Hospital for Women.

DODGSON, R. W., M.R.C.S., L.R.C.P., has been appointed House Physician to St. Mary's Hospital.

EDIS, J. B., L.R.C.P., Edin., M.R.C.S., has been reappointed Honorary Surgeon to the Liverpool Hospital for Women.

EMBLEY, E. H., M.B., Ch.M. Melb., has been reappointed Anæsthetist to the Melbourne Hospital, Victoria, Australia.

FISHER, F. C., F.R.C.S. Eng., has been reappointed Medical Officer for the King's Langley Sanitary District of the Hemel Hempstead Union.

FRASER, P., M.D., C.M. Edin., has been appointed Medical Officer of Health for the North Wales United Sanitary District.

GRIMSDALE, T. B., M.B. Cantab., M.R.C.S., has been reappointed Honorary Medical Officer to the Liverpool Hospital for Women.

HEAVEN, J. C., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer of Health by the Warmley Rural District Council.

HOWARD, F. R., L.D.S.R.C.S. Eng., has been reappointed Honorary Assistant Dental Surgeon, Birmingham Dental Hospital.

HOUSE, F. M., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer for the West Kimberley District, Public Vaccinator for the Urban and Suburban Districts of Derby, and the Rural District of West Kimberley, Western Australia.

KIRKLAND, HUGH, M.B., Ch.M. Glasg., has been appointed Honorary Surgeon-Lieutenant on the Medical Staff Corps, New South Wales Volunteer Forces.

LARKHAM, E. T., L.R.C.P., Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the Munslow Sanitary District of the Ludlow Union.

MADIN, W. T., L.D.S.R.C.S. Eng., has been reappointed Honorary Assistant Dental Surgeon, Birmingham Dental Hospital.

MAITLAND, H. L., M.B., Ch.M. Syd., has been appointed Honorary Assistant Surgeon to the Sydney Hospital, New South Wales.

MESSITER, A. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Isle of Axholme Rural Sanitary District.

MILLER, W. R., M.D., B.Ch. Dubl., has been appointed Honorary Surgeon, West Cornwall Infirmary and Dispensary, Penzance, vice A. W. F. Steer.

MOUNTFORD, JAS., L.D.S.R.C.S. Eng., has been reappointed Honorary Assistant Dental Surgeon, Birmingham Dental Hospital.

NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Pokesdown Urban District Council.

PARROTT, J. E., L.D.S.R.C.S. Eng., has been reappointed Honorary Assistant Dental Surgeon, Birmingham Dental Hospital.

PRIDMORE, E. L. N., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Weymouth Sanitary District of the Weymouth Union.

READING, P. B., L.D.S.R.C.S., F.P.S. Glasg., has been appointed Honorary Assistant Operating Dentist to the Sydney Hospital, New South Wales.

SANDERS, R. C., L.R.C.S. Irel., has been appointed a Public Vaccinator at Milawa, Victoria, Australia.

SMART, DAVID, M.B., C.M., B.Sc. Edin., has been reappointed Honorary Medical Officer to the Liverpool Hospital for Women.

WICKHAM, C. A., L.R.C.P. L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the East Ashford Union.

WILLIAMS, D. E., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Resident Medical Officer for the Wellington District, Public Vaccinator for the Urban and Suburban Districts of Bunbury and the Rural District of Wellington, and Quarantine Officer at Bunbury, Western Australia.

WILL, A. M., M.B., C.M. Aberd., has been appointed Honorary Assistant Physician to the Sydney Hospital, New South Wales.

WRIGHT, FRANCIS G., L.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Officer for the Gascoyne District, Public Vaccinator for the Urban and Suburban Districts of Carnarvon and the Rural District of Gascoyne, and Quarantine Officer at Carnarvon, Western Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Birmingham.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BURY DISPENSARY HOSPITAL.—Junior House Surgeon. Salary £60 per annum, with board, residence, and attendance. Applications to the Hon. Secretary, Dispensary, Knowsley-street, Bury, Lancashire.

BURY UNION, County of Lancaster.—District Medical Officer and Public Vaccinator for the Whitefield District. Salary as Medical Officer £40 per annum, and certain fees for Surgery, Midwifery, and Vaccination cases. Applications to the Union Clerk, Union Offices, Bury.

CARDIFF UNION.—Assistant Medical Officer for the Workhouse, for one year. Salary £100 per annum, with rations, apartments, attendance, and washing. Applications to the Clerk, Queen's Chambers, Cardiff.

DENTAL HOSPITAL OF LONDON, Leicester-square.—Assistant Dental Surgeon.

DUNDEE ROYAL INFIRMARY.—Resident Clinical Assistant. Board, lodging, and washing provided.

ESSEX COUNTY ASYLUM, Brentwood.—Third Assistant Medical Officer and Pathologist. Salary £120, with board, residence, and washing.

GENERAL INFIRMARY AND DISPENSARY, Doncaster.—In-door Dispenser and Assistant to House Surgeon. Board, lodging, and washing provided.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon. Board and lodging provided.

LIVERPOOL ROYAL INFIRMARY.—Assistant Honorary Physician.

LONDON HOSPITAL, Whitechapel, E.—Two Surgeon Dentists.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Physiology and Histology. Salary £100 per annum.

QUEEN'S JUBILEE HOSPITAL, Earl's-court, Kensington, S.W.—House Surgeon for six months. Salary at the rate of £100 per annum, and rooms adjoining the Hospital.

SEAMEN'S HOSPITAL SOCIETY.—Honorary Visiting Surgeon for the Branch Hospital, Royal Victoria and Albert Docks. Applications to the Secretary, Greenwich.

STAINES UNION.—Medical Officer for No. 8 Medical District. Salary £20 per annum with the usual fees for surgical and midwifery cases. Applications to the Clerk to the Guardians, Staines.

THE GUARDIANS OF THE POOR, CHELSEA.—Assistant Medical Officer (Male or Female) for the Workhouse and Infirmary. Salary £70 per annum, with furnished apartments, rations, washing, coals and gas, and £3 10s. a year in lieu of beer. Applications to Clerk to the Guardians, 260, King's-road, Chelsea.

UNIVERSITY OF GLASGOW.—Four Examiners for Degrees in Medicine, to examine in Anatomy, Midwifery, Medical Jurisprudence, and Botany respectively. Salary for the Examinership in Anatomy is £40 per annum, and for the others £30 per annum.

WALSINGHAM UNION.—Medical Officer for the No. 6 Wells District of the Union. Salary £68 10s. per annum, exclusive of certain fees. Applications to the Clerk, Bridge-street, Fakenham.

Births, Marriages, and Deaths.

BIRTHS.

CUNYNGHAM-BROWN.—On Jan. 13th, at Eldon House, Holmfirth, Yorks, the wife of Robert Cunyngham-Brown, M.B., B.S. Durh., of a son.

DAVIS.—On Jan. 22nd, at Sunnydene, Sidcup, the wife of G. W. Davis, M.D. Durh., of a son.

LOWNDS.—On Jan. 23rd, at Balham High-road, S.W., the wife of Chas. J. Lownds, B.A. Cantab., L.R.C.P., and D.P.H. Edin., of a son.

SMITH.—On Jan. 23rd, at Camden-square, N.W., the wife of J. Burnet Smith, M.B. Edin., of a son.

MARRIAGE.

FOWLER—PERKS.—On Jan. 28th, at the Church of St. Modwin's Burton-on-Trent, by the Rev. F. H. Beaven, Vicar of St. Paul's, assisted by the Rev. Vicars A. Boyle, Vicar of Burton, Edward George Bennett Fowler, eldest son of John Bennett Fowler, of Heathfield, Stoneygate, Leicester, to Florence Mary, elder daughter of Charles Perks, M.R.C.S. Eng., L.R.C.P. Lond., of Burton-on-Trent.

DEATHS.

ILLINGWORTH.—On Jan. 25th, from blood-poisoning, Charles Rumney Illingworth, M.D., D.P.H., of 69, Ritherdon-road, Upper Tooting, London. Aged 41 years. No cards.

JACKSON.—On Jan. 21st, at 17, Allan-park, Stirling, Surgeon-Lieut.-Colonel Thomas Wilson Jackson, M.B. Glasg., B.Sc. (Pub. Health) Edin., in his 51st year.

KELLY.—On Jan. 28th, at Park-street, Grosvenor-square, A. B. Kelly, M.R.C.S. Eng., L.R.C.P. Edin., aged 43.

MARTIN.—On Jan. 28th, at the Croft, London-road, Reading, Robert Spencer Martin, L.R.C.P. Edin., M.R.C.S Eng., aged 81.

ORME.—On Jan. 25th, suddenly, at his residence, The Firs, Leigh, Essex, Robert Orme, M.R.C.S., aged 56 years.

WEEKES.—On Jan 27th, at Mansion House, Brompton, Chatham, Henry Weekes, M.R.C.S., L.R.C.P., J.P. for Kent, aged 51 years.

WILSON.—On Dec. 22nd, at Broughville, Cheltenham, Edward Wilson, L.R.C.P. Lond., M.R.C.S. Eng., in his 39th year.

WHITE.—On Jan. 19th, whilst on a visit to Dinard, Brittany, Francis S. White, M.R.C.S., L.S.A., after five days' illness from paralysis, aged 39. Ceylon and Colonial papers please copy.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—SOCIETY OF ARTS.—8 P.M. Dr. J. A. Fleming: Alternate Current Transformers. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Watson Cheyne: The Objects and Limits of Operations for Cancer. (Lettsomian Lecture.)

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—Papers:—Mr. Symonds: Carcinomatous Cysts of the Breast.—Dr. Spreat: Carcinomatous Cyst of the Breast.—Mr. Davies-Colley: Bladder after Castration for Enlarged Prostate.—Dr. Rolleston: Chronic Dilatation of Colon in a Child.—Mr. Lockwood: Pedunculated Cysts in Hernial Sac. Card Specimens by Mr. Rutherford Morrison, Mr. Lockwood, and Dr. R. T. Hewlett.

SOCIETY OF ARTS.—8 P.M. Mr. F. Inigo Thomas: The Garden in Relation to the House.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens by Dr. Playfair, Dr. Duncan, and others. Paper:—Mr. Harrison Cripps: Abdominal Hysterectomy with Intra-peritoneal Treatment of the Stump, with Notes of Eight cases. Annual Meeting. The President (Dr. Champneys) will deliver the Annual Address.

SOCIETY OF ARTS.—8 P.M. Mr. Frederick Henry Cheesewright: The Mexican Drainage Canal.

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Mr. C. Mansell Moullin: Some of the Recent Results of Orchotomy for Enlarged Prostate.

FRIDAY.—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Mr. Poland will exhibit a case of Thyroidal Tumour after Operation. Discussion on Cough—Mr. Mayo Collier, Drs. Herschell, Tayler, Henry, and others.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hale White: Two cases of Pneumothorax in the course of Typhoid Fever, and both due to straining at stool.—Mr. Pitts and Mr. Ballance: On Splenectomy for Rupture, with three successful cases.—Mr. Golding Bird: A case of Lymph Scrotum and Lymphatic Varix.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Mr. J. Hutchinson: The Laws of Inheritance with reference to Gout.—Dr. Archibald Garrod: The *Rationale* of the accepted Treatment of Gout. Specimens of Renal Calculi will be shown by Messrs. Keetley, Edwards, Bidwell, and others.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Roy. Lond. Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Clinical Examination of the Eye.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. W. R. H. Stewart: Examination of the Ear.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Mania—Acute Hysterical, Acute Delirious.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The External Covering of Plants and Animals: its Structure and Functions.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

LONDON POST-GRADUATE COURSE.—Roy. Lond. Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Quarry Silcock: Choroidal Diseases, with Ophthalmoscopic Demonstrations.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: The Varieties of Eczema.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Mitchell Bruce: Pleurisy.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Syphilis.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Percy Dunn: Ophthalmic Cases.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. P. H. Wicksteed: Dante.

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Mr. John Hopkins: Clinical Lecture.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M. Dr. Allan Macfadyen and Mr. A. G. Foulerton: More Important Constituents of Normal Urine.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: The Microscope and Methods of Cultivation.

ROYAL INSTITUTION.—9 P.M. Hon. John Collier: Portrait Painting in its Historical Aspects.

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Prof. C. Hubert H. Parry: Realism and Idealism in Musical Art (with Musical Illustrations).

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Lichen Planus.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 30th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 24	30·16	S.W.	43	41	72	49	36	...	Cloudy
,, 25	29·93	S.W.	49	48	55	52	42	0·12	Raining
,, 26	30·03	N.	49	48	54	49	48	0·20	Overcast
,, 27	30·35	S.	45	44	54	50	43	...	Overcast
,, 28	30·35	N.	46	45	72	49	45	0·12	Overcast
,, 29	30·78	S.W.	38	36	54	47	34	...	Foggy
,, 30	30·88	W.	36	35	45	37	35	...	Foggy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

A HORRIBLE TRADE.

To the Editors of THE LANCET.

SIRS,—I do not know whether the medical profession in this country is cognisant of the steady but continual growth of an evil which the law does not notice, and about which the average well educated man of the world can have little idea. I allude to the means by which pregnancy can be prevented *ab initio*, which has happily not yet been introduced into an overloaded medical curriculum, and which is as distasteful a subject to the medical practitioner as it would be to the most fastidious divine. But unless we choose to wait until M. Zola takes the matter in hand, and forces the slow machinery of the law to take action, it might be useful if one of the great medical corporations or the General Medical Council could collect enough evidence to prove that this abomination has lately forced itself into notice in a manner which can no longer be ignored by clean people. In common with most medical men I have had some hazy notion that in some of the streets not so far from the Law Courts as prudence should suggest to their owners there has been for many years an illicit traffic in various preventatives of pregnancy. Now and again such information is cunningly worked up into an advertisement, and meets the eye amongst such innocent company as the last fashion in sanitary undergarments and the latest fad in tinned beef. But I had yet to learn that the druggist's shop was the centre from which such drugs and instruments were now distributed, accompanied with the fullest directions in plain matter-of-fact language. No greater proof of the extent and importance of this trade can be cited than the statement of the fact that catalogues of the various articles are issued, numbered in regular order; that the drugs are put up in little boxes and large—a reduction on the larger size; that travellers go about the country showing their samples, and that catalogues are distributed by post to probably every address in the trade directory; and that there is also a pamphlet for home reading, written as a dialogue between two men—the one prosperous and happy, and the other poor and needy in every thing except a large family.

We shall perhaps be told that respectable druggists resolutely refuse to have any dealings in this filthy trade. Happily, this is true in

hundreds of instances. But the wary dealer is not easily pushed aside; unable to negotiate with the master he traffics with the servant. The assistant may become his agent, and can, I am assured, easily augment his salary by this lucrative trade, in which there is little tendency to haggle over the price. On every side there is a disposition to secrecy, and the druggist never learns that his establishment has become an emporium to distribute these nefarious wares.

You, Sirs, may easily plead that this subject is not one a decent man would care to handle with a pair of tongs; but I trust you will agree with me in the hope that whatever are to be the changes in the modes and manners of the medical profession, it must never identify itself in this matter, however indirectly; and that once and for ever, if this evil is to continue, at all events it shall never exist as a sidewing of the healing art. And I feel sure that the majority of your readers will gladly assist in evoking the aid of the law to prevent the further spread of this horrible trade. I am, Sirs, your obedient servant,

G. H. W.

A Rupture Curer.—The address does not correspond with any in the Medical Register, though the practitioner in question appears in the Medical Directory under the address given. Our correspondent is thanked. It is lamentable that a university should be without penal powers in such a case.

Res. Med. Off.—It is compulsory to make a post-mortem and give evidence under the coroner's order. No fee can be claimed if deceased expires within the hospital.

Dr. W. K. is thanked for his communication.

REMUNERATION FOR AMBULANCE LECTURES.

To the Editors of THE LANCET.

SIRS,—I should feel much obliged if any readers of THE LANCET can quote me an instance where a county council or other public body has made a grant to a lecturer on "first aid" or "ambulance" work. The expenses of such a class are often partly met by a grant from a county council, but I am not aware of any instance where a lecturer under the auspices of the St. John Ambulance Association has received any remuneration for his time and trouble from the public funds. When one considers the amount of money spent on other and less important subjects, I think lecturers on this subject should at least have some return for their labours. Before delivering one course of lectures I applied to the county council for a fee for lecturing. An arrangement was made between the secretary for the local centre of the St. John Ambulance Association and the secretary to the county council for a grant; but this grant, amounting to about £4, was more than swallowed up in expenses. Rather than deprive so good a cause as the Association of its necessary funds I allowed the matter to drop. I must add that members of my classes have always shown their appreciation of my labours by making me a presentation, but many lecturers, like myself, would rather see a business-like arrangement—say a nominal fee for each course of lectures, than that subscriptions should be asked from those who can ill afford to give them. Any suggestions on this point will be thankfully received by Yours faithfully,

Jan. 28th, 1896. DEMULCENT.

Mr. T. Plymes.—We have no leaflets or pamphlets in this office dealing with the topic. There is clearly much to be said on each side; but the idiosyncracy of the smoker counts for everything, and general statements will always be as wrong as tney are right for the general public.

Scirrhus.—No reliable information has reached us on the subject.

THE EFFECTS OF MARRYING "IN-AND-IN."

To the Editors of THE LANCET.

SIRS,—While walking the hospitals in 1874-75, a little after the Franco-Prussian War, I came across a book in the British Museum on "Ethnology," written about forty or fifty years before the aforesaid time. In it the writer said (1) that the French people, swelled with pride, would not intermarry with the surrounding nations, and that the Prussians were freely allying themselves in marriage with the various nationalities that surrounded them, and that should the French and Prussians engage in hostilities the latter (the Prussians) would be victorious; (2) that the Boers, or Dutch farmers, of South Africa were then freely intermarrying with the Zulus, and that if they came in contact with the British, who were marrying "in-and-in," the former (the Boers) would get the best of it; (3) that the mixed races of America (the Euro-African) would in 100 years' time be the rulers of America; and (4) that the Euro-Asians of India would be the future Prime Ministers of Europe and America, &c. Can you or any of your readers tell me the names of the work and its writer, as I have entirely forgotten them? I am, Sirs, yours faithfully,

Jan. 27th, 1896. M.B.

WANTED, AN ANGLO-FRENCH DICTIONARY OF SCIENTIFIC TERMS.

To the Editors of THE LANCET.

SIRS,—Some time ago one of your correspondents wrote asking if any French dictionary of scientific terms existed in this country. So far I have seen no answer, and I wish to repeat the question, as I am in want of a dictionary of such a nature, especially one which translates geological terms. I shall be much obliged if any of your correspondents can give me any help. I am, Sirs, yours faithfully,

Temple Sowerby, Penrith, Jan. 21st, 1896. LOUIS E. STEVENSON.

THE POSITION OF NURSES.

To the Editors of THE LANCET.

SIRS,—In a leading article on "Nurses and their Training" in THE LANCET of Jan. 11th certain nurses are spoken of in the following words: "..... who tread on everybody's corns, from the youngest servant up to her mistress; who seem to think that nursing means the exaction of as much attention to themselves as the patient requires, the appropriation of the patient and the bedroom, and the exclusion from it of those whose affection and solicitude it is her duty to consider, and, finally, who assume airs and authority of a medical character. Medical practitioners are often hindered and annoyed by such qualities in nurses." Lower down in the article you go on to remark: "We readily recognise that such unfit and unfortunate nurses are the exception." Now, my experience is that they are the rule and not the exception. We want in a nurse, as you truly say, "not an equal, but a subordinate—one to accept his [the medical man's] diagnosis, and to carry out his instructions, and one who, as Sir Dyce Duckworth has said, should, above all, have perfect command of the tongue, and be able to check any tendency to recount all the wonderful cases she has seen." "Perfect command of the tongue" is just the one faculty in her mental organisation she does not possess. Hence she boasts, "I nursed Mrs. or Lady So-and-so's child in a dreadful case of scarlet fever, and *pulled it through!*" She occupy a subordinate position, Sirs, with her registration, diploma—for she will get it—her uniform, and her admirers? How can you expect it? She must be honoured—or look out for squalls. The medical attendant's character and position in any given case are not safe, for her tongue is often filled with scandal and lies. I send you an extract from a popular novel, written by a woman who seems to be well up in the present position and bearing of our nurses. The novel is "Marcella," by Mrs. Humphrey Ward. I will only add that in my opinion in the unimaginary narrative the medical man in attendance was neither intoxicated, nor had he endangered the life of the patient; but the author's purpose is gained—it magnifies the nurse. Here, briefly, is the narrative. "He [the medical man] moved towards the bed and she [the nurse] with him. The woman moaned as he approached her. He set about his business with hands that shook. Marcella decided at once that he was not sober, and watched his proceedings with increasing disgust and amazement. Presently she could bear it no longer. 'I think,' she said, touching his arm, 'that you had better leave it to me and go away.' He drew himself up with a start, which sent the things he held flying, and faced her fiercely. 'What do you mean?' he said. 'Don't you know your place?' The girl was very white, but her eyes were scornfully steady. 'Yes, I know my place.' Then, with a composure as fearless as it was scathing, she said what she had to say. She knew, and he could not deny, that he had endangered his patient's life. She pointed out that he was in a fair way to endanger it again. Every word she said lay absolutely within her sphere as a nurse. His cloudy brow cleared under the stress of it. ..... 'You understand,' he said thickly, turning upon her with his hat in his hand, 'I shall not attend this case again until your association can send me a nurse that will do as she is told without insolence to the doctor. I shall now write a note to your superintendent.' 'As you please,' said Marcella quietly, and she went to the door and opened it." Comment is needless. The medical man was certainly not intoxicated; the nurse was certainly impertinent and did not know her place, and a good nurse is still a *rara avis*. I remain, Sirs, yours obediently,

Cornwall, Jan. 20th, 1896. LOOKER-ON.

WE have received an interesting paper entitled "Accidental Rashes with Typhoid and Typhus Fevers simulating the Rash of Scarlet Fever," to which the author has forgotten to attach his name. Will he kindly communicate with us?

Tartarin.—Coroners are amenable to the Lord Chief Justice, who is Chief Coroner of England, but in any case of complaint against a coroner the Chief Justice must be approached judicially on proper evidence and through the ordinary channel of his court.

A Local Practitioner.—The conversation reported to us shows little but the narrowness of the chief talker. It is not worth notice.

Sceptic.—We have made inquiries in more than one direction, but at present can give our correspondent no information.

Dr. Arthur MacDonald's communication deals with a subject which hardly falls within the scope of THE LANCET.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Torquay Directory, Forfar Herald, Dewsbury Reporter, North Star, Brighton Gazette, Scotsman, Banffshire Herald, Portsmouth Times, Newcastle Journal, Bradford Observer, Western Daily News, Sheffield Telegraph, Cork Daily Telegraph, Hastings News, Midland Free Press, Manchester Evening Mail, Herne Bay Argus, Wolverhampton Chronicle, Bury Guardian, South Wales Times, Shrewsbury Chronicle, General Advertiser (Dundee), Australasian Medical Gazette, Hinckley Times, Rochester Journal, Southampton Times, Cornish Telegraph, Huddersfield Chronicle (Bridgend), Sunderland Herald, Bristol Times and Mirror, Clacton Gazette, Le Chasseur Français, Cheltenham Examiner, Gloucestershire Echo, Walton Gazette, Elgin Courant, Lincolnshire Chronicle, South Wales Daily News, Chronicle, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Messrs. Arnold and Sons, West Smithfield; Attwood's Reporting Agency, Lond., Sec. of; Æsculap Bitter Water Co., Lond.; Athol Hotel, Douglas, Proprietor of; A.M.D., Lond.

B.—Dr. C. L. Birmingham, Sheffield; Dr. Bond, Gloucester; Dr. G. A. Bannatyne, Bath; Dr. Bailey, Liverpool; Dr. Beynu, Weinfelden; Mr. C. J. Bond, Leicester; Mr. R. E. W. Brewer, Newport, Mon.; Mr. J. F. Briscoe, Alton; Messrs. Blondeau et Cie., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Bury Dispensary Hosp., Sec. of; British-American Ball Nozzle Co., Lond.; *Bury Times*, Publishers of.

C.—Dr. H. E. Crook; Margate; Dr. Cashin, Southsea; Mr. H. Cripps, Lond.; Mr. F. E. Crane, Liverpool; Mr. W. W. Cheyne, Lond.; Mr. H. C. Clarke, Lond.; Mr. H. Cropley, Northampton; Mr. A. Cowes, Lond.; Mr. W. Cowan, Glasgow; Messrs. Cassell and Co., Lond.; Messrs. T. Christy and Co., Lond.; Messrs J. and A. Churchill, Lond.; *Chemist and Druggist*, Lond.; Condal Water Co., Lond., Managing Director of.

D.—Mr. A. Driver, Chelmsford; Mr. W. G. Dickinson, Lond.; Messrs. S. Dusselsma and Co, Lond.; Messrs. W. Dawson and Sons, Lond.; Doncaster Gen. Infirmary, Hon. Sec. of.

E.—Mr. T. S. Ellis, Gloucester.

F.—Dr. W. S. Frith, Rickmansworth; Dr. P. C. Fenwick, Lond.; Mr. F. C. Fry, Herts; Mr. A. H. Fletcher, Lond.; Messrs. Fannin and Co., Dublin; Friendly Workers' Association, Lond., Sec. of; F. F. D., Alton, Hants; Fly, Lond.

G.—Dr. H. L. Gordon, Lond.; Gamma, Lond.

H.—Dr. J. S. Haldane, Oxford; Dr. E. de W. Hutchinson, Bridlington; Mr. W. Hudson, Lond.; Mr. H. R. Hardy, Norwich; Mr. W. C. Hughes, Lond.; Mr. J. Hart, Lond.; Messrs. Humphreys, Lond.; Messrs. J. V. Halford and Son, Lond.; Messrs. Hertz and Collingwood, Lond.; *Herald*, Carnarvon, Publisher of; Hampstead Library, Librarian of; Herts, Lond.

I.—Institute of Chemistry of Great Britain & Ireland, Lond., Sec. of.

J.—Mr. H. James, Brighton; J. H., Lond.

K.—Mr. R. T. Kent, Glasgow; Mr. G. A. Keyworth, Hastings; Messrs. Keith and Co., Edinburgh; Messrs. W. and J. Kennedy, Hawick; Messrs. Kiesow and Co., Lond.

L.—Mr. J. Lämmel, Belfast; Mr. H. K. Lewis, Lond.; Messrs. Lee and Martin, Birmingham; *La Riforma Medica*, Napoli; Lond. Post-Graduate Course, Sec. of; Liverpool Infirmary for Children, Hon. Sec. of; Liverpool Royal Infirmary, Chairman of; London Assocn. of Nurses, Lady Supt. of; Leidy Fellowship in Anatomy, Philadelphia, Sec. of.

M.—Dr. N. Moore, Lond.; Dr. D. J. Macdonald, Wallsall; Dr. Melville, Penicuik; Mr. D. C. McArthur, Witheridge; Mr. J. Meeham, Nottingham; Mr. C. Martin, Edgbaston; Mr. J. McCall, Monlaive; Messrs. Macmillan and Co., Lond.; Messrs. Maple and Co., Lond.; Messrs. J. Maythorne and Son, Biggleswade; Messrs. C. Mitchell and Co., Lond.; Maltine Mfg. Co., Lond.; Midwifery Nurses Register, Cheshire, Sec. of; M.O.H., Lond.

N.—Dr. M. G. Naidu, Hyderabad; Dr. J. Norack, Budapest; Mr. S. P. Newbott, Liverpool; Mr. W. Newton, Lond.; Mrs. E. C. Nearns, Feversham.

O.—Prof. A. Ogston, Aberdeen; Mr. J. O'Shaughnessy, Limerick; Od Chemical Co., New York.

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